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**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

THE PEOPLE OF THE STATE OF  
CALIFORNIA, ex rel. ROB BONTA,  
ATTORNEY GENERAL OF CALIFORNIA,

Plaintiffs,

v.

EXXON MOBIL CORPORATION; AND  
DOES 1 THROUGH 100, INCLUSIVE,

Defendants.

Case No.

**DECLARATION OF DAWN SESTITO  
IN SUPPORT OF NOTICE OF  
REMOVAL**

Removed from the Superior Court of the  
State of California for the County of  
Francisco, Case No. CGC-24618323

Action Filed: September 23, 2024

1 I, Dawn Sestito, declare as follows:

2 1. I am an attorney admitted to practice law before all courts of the State of  
3 California and in the United States District Court for the Northern District of California. I am a  
4 Partner in the law firm of O'Melveny and Myers LLP, and I am one of the attorneys responsible  
5 for the representation of Defendant Exxon Mobil Corporation ("ExxonMobil") in this matter. I  
6 make this declaration in support of Defendant's Notice of Removal, filed concurrently herewith.  
7 Unless otherwise stated, the following facts are within my personal knowledge and, if called and  
8 sworn as a witness, I could and would testify competently thereto.<sup>1</sup>

9 2. I understand that ExxonMobil was served with a copy of the Complaint and  
10 Summons filed in the Superior Court of the State of California in the County of San Francisco on  
11 October 4, 2024. Attached hereto as **Exhibit 1** is a true and correct copy of all process,  
12 pleadings, and orders from the state-court action being removed to this Court that purportedly  
13 have been served on ExxonMobil. Pursuant to 28 U.S.C. § 1446(a), this constitutes "a copy of all  
14 process, pleadings, and orders served upon" ExxonMobil in the action.

15 3. Attached hereto as **Exhibit 2** is a copy of excerpts of the Rubber Reserve  
16 Company's *Report on the Rubber Program, Supplement No. 1 Year 1945*, dated April 8, 1946.

17 4. Attached hereto as **Exhibit 3** is a copy of excerpts of a Report of the Director of  
18 Rubber Programs to the War Production Board, dated November 3, 1945.

19 5. Attached hereto as **Exhibit 4** is a copy the First Report of the Attorney General on  
20 Competition in the Synthetic Rubber Industry, dated May 1, 1956.

21 6. Attached hereto as **Exhibit 5** is a copy of excerpts of the 1959 Final Report on the  
22 Reconstruction Finance Corporation.

23 7. Attached hereto as **Exhibit 6** is a copy of the Charter of Defense Plant  
24 Corporation, dated August 22, 1940.

25  
26  
27 <sup>1</sup> This declaration is not intended to operate as an admission of any factual allegation or legal  
28 defense, or objection, including personal jurisdiction.

1           8.       Attached hereto as **Exhibit 7** is a copy of the Charter of Rubber Reserve  
2 Company, dated June 28, 1940.

3           9.       Attached hereto as **Exhibit 8** is a copy of excerpts of the Rubber Reserve  
4 Company's *Report on the Rubber Program, 1940-1945*, February 24, 1945.

5           10.      Attached as **Exhibit 9** is a copy of excerpts of a *Report of the Rubber Survey*  
6 *Committee*, by Bernard M. Baruch, James B. Conant, and Karl T. Compton, dated September 10,  
7 1942.

8           11.      Attached as **Exhibit 10** is a copy of excerpts of the Reconstruction Finance  
9 Corporation's *Report with Respect to the Development of a Program for Disposal of the*  
10 *Government-Owned Rubber-Producing Facilities*, dated April 1, 1949.

11          12.      Attached hereto as **Exhibit 11** is copy of a memorandum from A.L. Brandlhofer,  
12 of the Rubber Reserve Company, to G.M. Hebbard re: Estimated Butyl Consumption, dated July  
13 21, 1945.

14          13.      Attached hereto as **Exhibit 12** is a copy of a lease agreement between the Defense  
15 Plant Corporation and Humble Oil & Refining Company, relating to Plancor 1082, dated May 18,  
16 1942.

17          14.      Attached hereto as **Exhibit 13** is a copy of an agreement between Humble Oil &  
18 Refining Company and the Rubber Reserve Company, covering the operation of the Butadiene  
19 Plant at Baytown, Texas, dated March 25, 1942.

20          15.      Attached hereto as **Exhibit 14** is a copy of a "Humble Engineering Estimate"  
21 relating to a May 18, 1942 agreement between Humble Oil & Refining Company and the Rubber  
22 Reserve Company, covering the operation of the Butyl Plant at Baytown Texas, dated January 3,  
23 1946.

24          16.      Attached hereto as **Exhibit 15** is a copy an April 21, 1947 "Prior Approval of  
25 Reimbursable Cost," from the Rubber Reserve Company, concerning an agreement between  
26 Standard Oil Company of New Jersey, Louisiana Division, and the Reconstruction Finance  
27  
28

1 Corporation, covering the operation of the GR-I Rubber Plant at Baton Rouge, Louisiana, dated  
2 July 9, 1942.

3 17. Attached hereto as **Exhibit 16** is a copy a letter to Frank J. Cogan from Esso  
4 Standard Oil Company, Louisiana Division, dated September 9, 1949.

5 I declare under penalty of perjury under the laws of the State of California and the United  
6 States of America that the foregoing is true and correct and that I executed this Declaration on  
7 November 1, 2024, at Los Angeles, California.

8  
9 Dated: November 1, 2024

O'MELVENY & MYERS LLP

10 By:

11  
12 

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**CGC-24-618323**

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

**THE PEOPLE OF THE STATE OF  
CALIFORNIA, ex rel. ROB BONTA,  
ATTORNEY GENERAL OF  
CALIFORNIA,**

Plaintiff,

**v.**

**EXXON MOBIL CORPORATION; AND  
DOES 1 THROUGH 100, INCLUSIVE,**

Defendants.

Case No.

**COMPLAINT FOR ABATEMENT,  
EQUITABLE RELIEF, AND CIVIL  
PENALTIES; PRELIMINARY AND  
PERMANENT INJUNCTION**

**JURY TRIAL DEMANDED**

- (1) PUBLIC NUISANCE;**
- (2) GOVERNMENT CODE SECTION  
12607;**
- (3) WATER POLLUTION;**
- (4) UNTRUE OR MISLEADING  
ADVERTISING;**
- (5) MISLEADING ENVIRONMENTAL  
MARKETING; AND**
- (6) UNLAWFUL, UNFAIR, OR  
FRAUDULENT BUSINESS  
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1 The People of the State of California, by and through Attorney General Rob Bonta, for the  
 2 protection of the State's<sup>1</sup> natural resources and residents, allege<sup>2</sup> as follows:

### 3 INTRODUCTION

4 1. The plastics industry, through its deceptive public messaging regarding plastic  
 5 recycling, is responsible for one of the most devastating global environmental crises of our time:  
 6 the plastic waste and pollution crisis.

7 2. ExxonMobil, the largest producer of plastic polymers used to manufacture  
 8 single-use plastics, caused or substantially contributed to the deluge of plastic pollution that has  
 9 harmed and continues to harm California's environment, wildlife, natural resources, and people.  
 10 ExxonMobil not only promotes and produces the largest amount of plastic that becomes plastic  
 11 waste in California, it has also deceived Californians for almost half a century by promising that  
 12 recycling could and would solve the ever-growing plastic waste crisis. All the while, ExxonMobil  
 13 has known that mechanical recycling, and now "advanced recycling," will never be able to  
 14 process more than a tiny fraction of the plastic waste it produces.

15 3. Even as it ramped up plastic production and deceptively promoted recycling as  
 16 a cure-all for plastic waste, ExxonMobil knew that the consequent amount of plastic waste would  
 17 continue to rise, inevitably leading to ever-increasing plastic pollution of the environment,  
 18 harming California's iconic coastlines, waterways, wildlife, and residents. ExxonMobil knew that  
 19 once plastic enters the environment it is extremely costly and difficult to eradicate and that plastic  
 20 predictably disintegrates into microplastics—tiny plastic bits measuring five millimeters or less—  
 21 which pose an even greater threat of harm to the environment and all living things, including  
 22 human bodies. For decades, ExxonMobil has dumped the cleanup and environmental costs of its  
 23 plastic production on the public, and Californians are paying the price.

24 ///

25 \_\_\_\_\_  
 26 <sup>1</sup> In this Complaint, the term "State" refers to the State of California, unless otherwise  
 27 stated. The term "California" refers to the area falling within the State's geographic boundaries,  
 28 unless otherwise stated. The State expressly disclaims injuries arising on federal land and tribal  
 lands held in trust by the United States and does not seek recovery or relief attributable to these  
 injuries.

<sup>2</sup> The allegations herein are based on information and belief unless otherwise indicated.

1           4.           Plastics are made from fossil fuels like natural gas or petroleum. ExxonMobil,  
2 one of the world's largest oil and gas companies, provides fossil fuel inputs for plastic production.  
3 As a vertically integrated company, ExxonMobil also has a chemical division that converts its  
4 fossil fuels into plastic monomers and polymers, such as ethylene, propylene, polyethylene, and  
5 polypropylene, which are commonly made into consumer products and packaging, including  
6 single-use plastics (i.e., use once and dispose). Those consumer products include plastic bottles,  
7 bags, snack wrappers, straws, cups, balloons, and other products that become plastic waste and  
8 plastic pollution in California and elsewhere. ExxonMobil stands at the top of the plastic-  
9 production pyramid, as the world's largest producer of single-use plastic polymers, and  
10 ExxonMobil continues to grow its plastics production—guaranteeing the plastic waste and  
11 pollution crisis will continue to grow.

12           5.           As a leader in the plastics industry, ExxonMobil has aggressively promoted the  
13 development of fossil-fuel-based plastic products and campaigned to minimize the public's  
14 understanding of the harmful consequences of these products. It has sought to convince the public  
15 through a decades-long campaign of deception that recycling is the solution to plastic waste,  
16 despite knowing full well that the infrastructure, market, and technology for plastic recycling,  
17 particularly for single-use plastics, are woefully inadequate for the volume of plastic ExxonMobil  
18 produces, and that it is technically and economically nonviable to handle the amount of plastic  
19 waste it produces. This campaign of deception continues to this day.

20           6.           ExxonMobil's deceptive statements were designed to mislead consumers and  
21 the public—including the State, its businesses, and its residents—about the serious adverse  
22 consequences that would foreseeably result from continued and increased production of plastic  
23 products. ExxonMobil's deceptions undermined consumers' ability to make informed choices to  
24 avoid the catastrophic harms we are experiencing. Globally, and in California, single-use plastic  
25 chokes our waterways, poisons our oceans, harms already endangered and threatened wildlife,  
26 blights our landscapes, contaminates the recycling stream, increases waste management costs,  
27 pollutes our drinking water, and expands landfills. While pushing the costs of these harms onto  
28 Californians and inflicting environmental injustices on the State's most vulnerable communities,

ExxonMobil's deception has allowed it to continue to profitably and rapidly grow its single-use plastic production business.

7. ExxonMobil must be held accountable for its actions.

## **PARTIES**

### **I. PLAINTIFF.**

8. Plaintiff is the People of the State of California. This civil enforcement action is prosecuted on behalf of the People by and through Rob Bonta, Attorney General of California, under the Attorney General's broad independent powers to enforce state laws (Cal. Const. art. V, § 13), and pursuant to Government Code section 12600 et seq.; Fish and Game Code sections 5650.1 and 5650; Civil Code sections 3479, 3480, 3491, and 3494; Business and Professions Code section 17203, 17204, 17206, 17535, and 17536; and Code of Civil Procedure sections 731 and 1021.8.

### **II. DEFENDANT EXXONMOBIL.**

#### **A. ExxonMobil's Corporate Structure.**

9. Defendant Exxon Mobil Corporation is a New Jersey corporation headquartered in Spring, Texas, and has been registered to do business in California since 1972. Exxon Mobil Corporation is a multinational, vertically integrated energy and chemical company and one of the largest publicly traded international oil and gas companies in the world. Exxon Mobil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Exxon Corporation; ExxonMobil Refining and Supply Company; Exxon Chemical U.S.A.; ExxonMobil Chemical Corporation; ExxonMobil Chemical U.S.A.; ExxonMobil Refining & Supply Corporation; Exxon Company, U.S.A.; Standard Oil Company of New Jersey; and Mobil Corporation. On November 30, 1999, Exxon and Mobil merged to form Exxon Mobil Corporation.

10. ExxonMobil Chemical Company and ExxonMobil Product Solutions Company are divisions within Exxon Mobil Corporation, act on Exxon Mobil Corporation's behalf, and are subject to Exxon Mobil Corporation's control.

11. Defendant Exxon Mobil Corporation, including ExxonMobil Chemical

1 Company, ExxonMobil Product Solutions, and any predecessors, successors, parents,  
2 subsidiaries, affiliates, and divisions, are collectively referred to herein as “ExxonMobil.”

3 12. When this Complaint references an act or omission of ExxonMobil, unless  
4 specifically attributed or otherwise stated, such references mean that the officers, directors,  
5 agents, employees, or representatives of ExxonMobil committed or authorized such an act or  
6 omission, or failed to adequately supervise or properly control or direct their employees while  
7 engaged in the management, direction, operation or control of the affairs of ExxonMobil, and did  
8 so while acting within the scope of their employment or agency.

9 13. ExxonMobil’s Board holds the highest level of direct responsibility for policy  
10 within the company. ExxonMobil’s Chairman of the Board and Chief Executive Officer, its  
11 President, and the other members of its Management Committee have been actively engaged in  
12 discussions relating to plastics and the risks of plastic waste and pollution on an ongoing basis,  
13 and continue to actively promote the false narrative that recycling can solve plastic waste. The  
14 Board opposed a 2022 shareholder proposal to issue a report on how reducing virgin plastic  
15 production to reduce ocean plastic pollution would affect ExxonMobil’s financial position. The  
16 Board opposed a similar shareholder proposal in 2023, stating that proponents of the study  
17 wrongly concluded that solutions to plastic waste include “reduced use of plastics,” arguing that  
18 the proposal “understates the potential of recycling, particularly advanced recycling” to address  
19 plastic waste, and claiming that ExxonMobil can “address plastic waste in the environment while  
20 driving new economic growth in the United States through recycling—an important ‘win-win’  
21 that is achievable.”

22 **B. ExxonMobil’s Segments and Divisions.**

23 14. Exxon Mobil Corporation consists of numerous segments, divisions, and  
24 affiliates in all areas of the fossil fuel, petrochemical, and plastics industries with names that  
25 include ExxonMobil, Exxon, Esso, Mobil or XTO. ExxonMobil has an integrated business model  
26 “involving exploration for, and production of, crude oil and natural gas; manufacture, trade,  
27 transport and sale of crude oil, natural gas, petroleum products, petrochemicals, and a wide  
28 variety of specialty products.” This integration is clear from its SEC filings, where ExxonMobil

1 includes in its reportable segments Upstream (oil and gas), Energy Products (fuels), Chemical  
2 Products (plastics petrochemicals), and Specialty Products (lubricants).

3 15. ExxonMobil controls and has controlled company-wide decisions, including  
4 those of its various segments and divisions, about the quantity and extent of production of  
5 products and sales of products. ExxonMobil represents that its success, including its “ability to  
6 mitigate risk and provide attractive returns to shareholders, depends on [its] ability to successfully  
7 manage [its] overall portfolio, including diversification among types and locations of [its]  
8 projects, products produced, and strategies to divest assets.” ExxonMobil determines whether and  
9 to what extent its segments and divisions market, produce, and/or distribute products, including  
10 petrochemical products used to produce plastics, such as ethylene, polyethylene, and  
11 polypropylene, and products made from “advanced recycling,” such as “certified circular  
12 polymers.”

13 16. ExxonMobil controls and has controlled company-wide decisions, including  
14 those of its segments and divisions, related to marketing, advertising, and communications  
15 strategies concerning plastics and the relationship between plastics, recycling, and plastic-related  
16 impacts on the environment and humans.

17 **III. DEFENDANT DOES 1 THROUGH 100.**

18 17. Plaintiff is not aware of the true names and capacities of defendants sued herein  
19 as DOES 1 through 100, inclusive, and therefore sues those defendants by fictitious names. Each  
20 fictitiously named Defendant is responsible in some manner for the violations of law  
21 alleged. Plaintiff will amend this Complaint to add the true names of the fictitiously named  
22 defendants once they are discovered. Whenever reference is made in this Complaint to  
23 “Defendants” or “ExxonMobil,” such reference shall include DOES 1 through 100 as well as the  
24 named defendants.

25 18. At all relevant times, each Defendant acted as a principal, under express or  
26 implied agency, and/or with actual or ostensible authority to perform the acts alleged in this  
27 Complaint on behalf of every other named Defendant. At all relevant times, some or all  
28 Defendants acted as the agent of the others, and all Defendants acted within the scope of their

1 agency if acting as an agent of another.

2 19. At all relevant times, each Defendant knew or should have known that the other  
3 Defendants were engaging in or planned to engage in the violations of law alleged in this  
4 Complaint. Knowing that the other Defendants were engaging in such unlawful conduct, each  
5 Defendant nevertheless facilitated the commission of those unlawful acts. Each Defendant  
6 intended to and did encourage, facilitate, or assist in the commission of the unlawful acts, and  
7 thereby aided and abetted the other Defendants in the unlawful conduct.

8 20. Defendants have engaged in a conspiracy, common enterprise, and common  
9 course of conduct, the purpose of which is and was to engage in the violations of law alleged in  
10 this Complaint. The conspiracy, common enterprise, and common course of conduct continue to  
11 the present.

12 21. Defendants also served as the agent, servant, employee, alter ego, co-  
13 conspirator, aider and/or abettor of one or more of the ExxonMobil Defendants and acted  
14 individually and/or within the scope of its agency, servitude, employment, and conspiracy.

15 **IV. INDUSTRY GROUPS.**

16 22. For decades, ExxonMobil has used and funded numerous industry groups as a  
17 mechanism to widely spread deceptive messages about the environmental benefits and  
18 recyclability of plastic, including within California.

19 23. The American Chemistry Council (ACC), founded in 1872 and formerly called  
20 the Chemical Manufacturers Association, is an influential industry group that claims to “work[]  
21 for a more sustainable future by developing innovative solutions to advance recovery, recycling,  
22 and reuse of plastic,” among its work in other areas.

23 24. ExxonMobil has been part of the leadership of ACC for decades. ExxonMobil  
24 is currently a member of ACC’s Plastics Division. Numerous individuals at Exxon and Mobil sat  
25 on the Executive Committees for the Chemical Manufacturers Association. ACC leadership has  
26 included members of ExxonMobil’s executive team. ExxonMobil employees likewise have held  
27 leadership positions with ACC’s Plastic Division. From 2008 to 2013, ExxonMobil was the  
28 number one financial contributor to the ACC, in some years contributing three times more than

1 the number two contributor.

2 25. The Plastics Industry Association (PLASTICS) is another group that represents  
3 companies across the plastics supply chain. PLASTICS “protect[s], promote[s], and grow[s] the  
4 plastics industry.” PLASTICS was previously known as the Society of the Plastics Industry (SPI),  
5 until its 2016 name change to PLASTICS. SPI formed in 1937 with the primary purpose of  
6 building public acceptance of plastics. Exxon Chemical Company and Mobil Chemical Company  
7 and/or officials of those companies were members of SPI, on SPI’s executive committee and  
8 executive board, executive board members of SPI’s Council for Solid Waste Solutions, and  
9 headed many committees within SPI, including the Chemical Manufacturers Association  
10 Committee, the Environmental, Health, Safety & Operations Committee, State Affairs  
11 Committee, and the Federal Government Relations Committee. ExxonMobil is currently a  
12 member of PLASTICS. In 2023, an ExxonMobil Senior Sustainability Advisor was Vice Chair of  
13 PLASTICS’ Recycling Committee.

14 26. SPI created numerous subdivisions, including The Vinyl Institute, which has  
15 advocated for decades on behalf of the polyvinyl chloride (PVC) industry. Since at least 1992,  
16 Exxon Chemical US was an affiliate member of The Vinyl Institute. The Vinyl Institute became  
17 an independent organization in 2008. ExxonMobil is now a “Supporting Member” of the Vinyl  
18 Institute. SPI additionally formed a Plastic Bottle Division and the Council on Packaging in the  
19 Environment (COPE, previously known as Council on Plastics and Packaging in the Environment  
20 (COPPE)). COPE was disbanded in or around 1996.

21 27. SPI formed the Council for Solid Waste Solutions (Council) in 1988, which  
22 promoted recycling as an alternative to reducing plastics consumption. Exxon and Mobil were  
23 both on the executive board of the Council.<sup>3</sup>

24 28. In 1991, SPI formed the Partnership for Plastics Progress (Partnership), which  
25 replaced the Council. The purpose of the Partnership was “to provide coordinated industry-wide  
26 leadership at the CEO level and to deal with issues beyond solid waste.” The Partnership’s goal  
27 was “to bring to the fore a well-funded, strategic program of outreach, issues management and

28 <sup>3</sup> Council for Solid Waste Solutions, *The Urgent Need to Recycle* (July 17, 1989) *Time*.

1 legislative affairs to ensure that the public at large and key industry constituents understand the  
2 vital role that plastics play in our society.” Exxon and Mobil were both members of the  
3 Partnership.

4 29. Shortly after the Partnership was created, SPI changed the Partnership’s name  
5 to the American Plastics Council (APC). In or around 2002, the American Plastics Council  
6 merged with the ACC.

7 30. The Alliance to End Plastic Waste (Alliance) is an organization founded by 28  
8 corporations in 2019, including ExxonMobil. The Alliance purports to “end plastic waste in the  
9 environment and advance a circular economy for plastics,” and promotes the feasibility of  
10 “advanced” and mechanical recycling to achieve these goals. Since 2023, ExxonMobil has  
11 employed a full-time “loaned executive” working within the Alliance whose title is “Chief  
12 Advisor, Head of Americas.”

13 31. The Recycling Partnership is an organization that encourages local  
14 governments to improve their recycling programs, in support of the plastics industry’s deceptive  
15 narrative that plastics are sustainable and recycling can solve the plastic waste and pollution  
16 crisis. ExxonMobil has been a member of the Recycling Partnership since 2018, initially  
17 investing \$1.5 million into the organization.

18 32. Another group, America’s Plastic Makers, is an industry group that essentially  
19 consists of the ACC’s Plastics Division, which is made up of ExxonMobil and other businesses in  
20 the plastics industry. America’s Plastic Makers promotes the exceedingly unlikely claims that one  
21 hundred percent of U.S. plastic packaging will be recyclable or recoverable by 2030, and actually  
22 recycled, reused, or recovered by 2040, without any reduction in plastic use.

23 33. ExxonMobil also sponsors the Association of Plastic Recyclers. The  
24 Association of Plastic Recyclers proactively holds meetings in California and regularly seeks to  
25 influence California laws that are intended to reduce plastic waste and pollution.

26 **V. EXXONMOBIL’S BUSINESS SCOPE AND DEALINGS.**

27 34. ExxonMobil is one of the largest oil and gas companies in the world with \$36  
28 billion in profits in 2023, the largest oil and gas company in the United States, and the world’s

largest producer of petrochemical polymers used for single-use plastics.<sup>4</sup> These plastics petrochemicals are derived from oil and gas, allowing ExxonMobil to capitalize on being “the largest refiner and marketer of petroleum products” in the United States.

35. A key component of ExxonMobil’s overall business is producing chemicals for use in plastics, including ethylene, polyethylene, and polypropylene. ExxonMobil considers the production of these chemicals, which are used in single-use plastic products, as the “core” of its chemicals and products portfolio, with “80% of [ExxonMobil’s] growth [being] dependent on single-use plastics applications.” In 2023, ExxonMobil had an annual production capacity of 14.5 million tonnes<sup>5</sup> (31.9 billion pounds per year) of polyethylene and polypropylene plastics petrochemicals worldwide, including a production capacity of 7.7 million tonnes per year (16.3 billion pounds per year) in the United States. In 2021, ExxonMobil contributed more “virgin” plastic polymers (plastic material that has not been subject to earlier use and has not been blended with scrap or waste) bound for single-use plastic than any other petrochemical company—over six million tonnes, roughly equivalent to *two trillion* single-use plastic cups in that one year alone.<sup>6</sup>

36. In line with the rapid increase of plastic production globally (see Figure A, below), ExxonMobil is rapidly increasing its production of these plastics petrochemicals. In the past ten years, ExxonMobil has increased its worldwide ethylene production capacity by 32 percent, its polyethylene production capacity by 30 percent, and its polypropylene production capacity by 27 percent worldwide. In the United States, ExxonMobil has increased its plastics chemicals production capacity even more dramatically: ethylene capacity increased 77 percent, polyethylene capacity increased 82 percent, and polypropylene capacity increased 89 percent. See Figure B, below.

<sup>4</sup> Charles and Kimman, Minderoo Foundation, Plastic Waste Makers Index 2023 (2023) (hereafter Minderoo 2023).

<sup>5</sup> Note that ExxonMobil typically reports production in “metric tonnes.” “Tonne” is another term for metric ton. One tonne is equal to the weight of 1.1 U.S. tons (2,204.6 pounds). (See Encyclopedia Britannica, *Ton*, <https://www.britannica.com/science/ton> [as of Apr. 4, 2024].) In some cases, ExxonMobil employs U.S. units (lbs.) when reporting weights. This Complaint converts U.S. tons to tonnes throughout.

<sup>6</sup> Minderoo 2023, *supra*. This estimate assumes it takes about three grams of plastic petrochemicals to produce one plastic cup.

Figure A: Plastics Production Chart and Prediction To 2060<sup>7</sup>

Global plastic production with projections, 1950 to 2060



Annual production of polymer resin and fibers. Projections are based on the "business-as-usual" scenario which assumes that current policies remain unchanged in the foreseeable future.

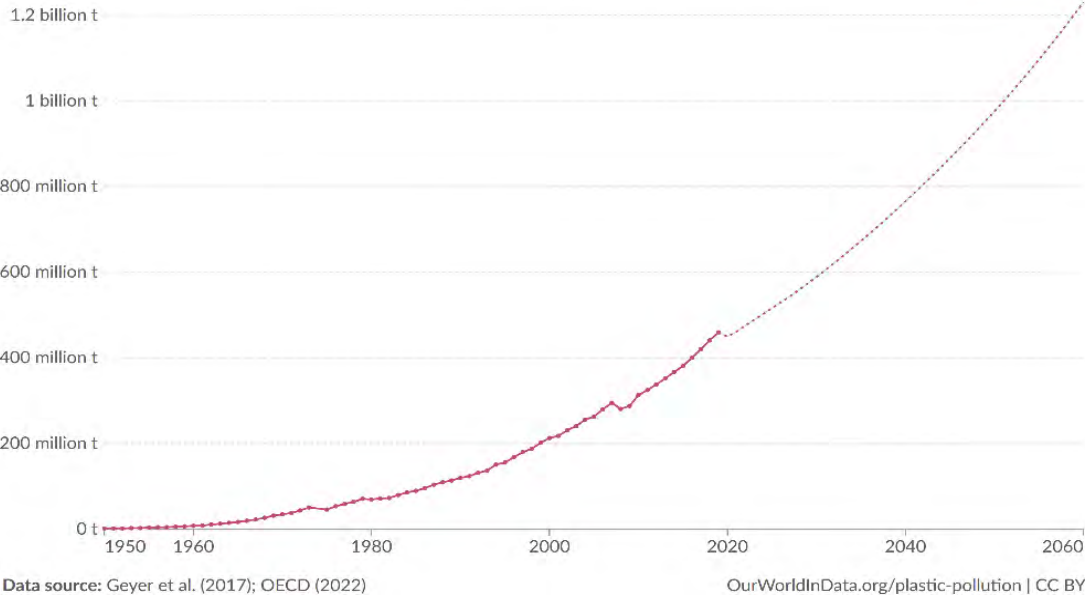


Figure B: ExxonMobil Plastic Chemical Production Capacity – 2014 through 2023

Year	U.S. Ethylene Capacity <i>In Million Tonnes</i>	U.S. Polyethylene Capacity <i>In Million Tonnes</i>	U.S. Polypropylene Capacity <i>In Million Tonnes</i>
2014	3.9	3.3	.9
2015	3.9	3.3	1.0
2016	3.9	3.3	1.1
2017	4.3	4.6	0.9
2018	5.8	4.6	1.1
2019	5.8	5.3	0.9
2020	5.8	5.3	0.9
2021	5.9	5.3	1.1
2022	6.9	6.0	1.6
2023	6.9	6.0	1.7

<sup>7</sup> Global Plastic Production with Projections, 1950 to 2060, Our World in Data <https://ourworldindata.org/grapher/global-plastic-production-projections> (as of July 29, 2024).

37. ExxonMobil continues to expand production capacity, including recently doubling its production capacity for polypropylene in Baton Rouge, Louisiana, increasing polyethylene production in Beaumont, Texas by 60 percent, and investing \$2 billion in a petrochemical plant in Baytown, Texas as part of a \$20 billion “Growing the Gulf” expansion that will significantly expand ExxonMobil’s virgin plastic production capacity.

38. ExxonMobil's Baytown Complex is emblematic of ExxonMobil's investment in virgin plastic production, refining 588,000 barrels of crude oil per day (the tenth largest refinery in the world) alongside a chemical plant that is "capable of producing more than eight billion pounds of petrochemical products" per year. In fact, ExxonMobil depends on single-use plastics production and consumption for its rapidly growing and profitable petrochemical business. ExxonMobil sold 32,035 tonnes of its polypropylene for making plastic cups in 2017, roughly equivalent to 8.8 billion single-use plastic cups.

## JURISDICTION AND VENUE

39. This Court has original jurisdiction over this action pursuant to article VI, section 10, of the California Constitution.

40. This Court also has personal jurisdiction over ExxonMobil pursuant to Code of Civil Procedure section 410.10. ExxonMobil purposefully availed itself of the California market, and thus of the benefits of the laws of the State, during all times relevant to this Complaint. ExxonMobil's operations, contacts, and ties with California establish California courts' exercise of jurisdiction over ExxonMobil consistent with traditional notions of fair play and substantial justice. ExxonMobil researched, developed, manufactured, designed, marketed, distributed, released, promoted, and/or otherwise sold petrochemical products, including petrochemicals that are used to make plastics and ExxonMobil "certified circular polymers," in California, giving rise to the claims of this suit.

41. ExxonMobil controls and continues to control decisions about the quantity and extent of its petrochemical production and sales and chooses to sell petrochemicals to entities in California; determines whether and to what extent to market, produce, and/or distribute its petrochemical products and markets and distributes petrochemical products in California; and

controls and continues to control decisions related to its marketing and advertising, specifically communications strategies concerning the efficacy of plastic recycling, including “advanced recycling,” and the relationship between plastics, recycling, and plastic-related impacts on the environment and humans, and has targeted California with those advertisements and communication strategies.

#### **I. EXXONMOBIL’S BUSINESS TIES TO CALIFORNIA.**

42. Significant quantities of ExxonMobil’s petrochemical products and plastics made from ExxonMobil’s petrochemicals are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities ExxonMobil derives and has derived substantial revenue—ExxonMobil’s U.S. earnings total over \$12 billion from chemical products in the past three years.

43. ExxonMobil’s petrochemical manufacturing is fused with ExxonMobil’s oil and gas production, with more than 90 percent of the company’s chemical capacity integrated with ExxonMobil refineries or natural gas processing plants. Historically, ExxonMobil owned 1,501 oil and gas wells in California. Until 2022, ExxonMobil operated another 58,212 wells in California with Shell Oil Company through a jointly owned entity, Aera Energy, LLC; 14,188 of these wells are currently active. Aera produces approximately 125,000 barrels of oil and 32 million cubic feet of natural gas per day and was sold to IKAV Energy in 2022 for \$4 billion. ExxonMobil also owns and operates a petroleum storage and transport facility in San Ardo, California. Until February 2024, ExxonMobil operated three offshore oil production platforms off the coast of Santa Barbara, and currently retains a large financial stake in the entity that purchased the platforms, Sable Offshore Corp.<sup>8</sup> In 2021, ExxonMobil Chemical Company acquired Materia Inc., a producer of plastic structural polymers headquartered in Pasadena, California, for \$156 million. ExxonMobil also owned and operated an oil refinery in Torrance, California from 1966 to 2016, operated a petroleum refinery in Benicia, California, from 1968 to 2000, and has a long history in California, including operating four manufacturing facilities (two chemical coatings

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<sup>8</sup> ExxonMobil sold the platforms to Sable for \$643 million but provided Sable a loan of at least \$625 million for the purchase.

and two plastic packaging facilities), a plastic production facility for polystyrene foam trays and egg cartons, a plastic production facility for polyethylene films for bags and meat and poultry wrappings, and a polystyrene recycling facility through partial ownership of the National Polystyrene Recycling Company.

44. ExxonMobil, through its chemical division, has a vast customer base for its plastics petrochemicals. Its customers include the largest U.S. suppliers of plastics packaging, including companies that produce single-use plastic bags, bottles, cups, and other food and beverage packaging that are sold nationwide, with products ending up in California under household brand names. For example, Exxon sells its plastics petrochemicals to Berry Global, who sells plastic products to the following national brands:

**Figure C: Berry Global Customers**



45. ExxonMobil also distributes its plastics petrochemicals to plastics distribution centers located throughout California. These distribution centers act as intermediaries between ExxonMobil and businesses that make and sell plastic products. Through these intermediaries, ExxonMobil's plastics petrochemicals become plastic bags, plastic cups, plastic water and soda bottles, plastic food packaging, and other single-use plastic products (among other applications). Additionally, California business customers have purchased ExxonMobil's "advanced recycling" "certified circular polymers" for use in single-use plastic products. ExxonMobil also regularly participates in trade conferences in California to promote its petrochemical plastics products to intermediaries and other business customers.

46. ExxonMobil uses its intermediaries and business customers to help promote

1 plastics consumption as environmentally sustainable in an effort to increase or maintain demand  
2 for ExxonMobil's plastics petrochemicals. Most recently, ExxonMobil has partnered with several  
3 businesses that sell products in California, including a California-based plastics producer, to  
4 promote ExxonMobil's "advanced recycling" by issuing press releases to promote the use of  
5 ExxonMobil's "certified circular polymers."

6 47. ExxonMobil views government regulations affecting "production or use of new  
7 or recycled plastics" as a significant "risk factor" to its business. Accordingly, ExxonMobil has  
8 lobbied extensively against plastics regulations in California, and specifically against legislation  
9 holding plastics producers accountable for the environmental impacts of its products.<sup>9</sup> In 2022,  
10 ExxonMobil paid \$4 million to the American Chemistry Council (ACC) to fight a California  
11 ballot measure seeking to establish an extended producer responsibility program<sup>10</sup> for plastic  
12 products. Since 2020, ExxonMobil has paid \$23.4 million to the ACC to fund national lobbying  
13 efforts to promote plastic products across the United States, including within California. Recently,  
14 ExxonMobil identified California as a target market for new legislation to promote "advanced  
15 recycling" as an alleged solution to the plastic waste crisis. ExxonMobil also targets California  
16 with advertising, such as radio spots related to its ongoing efforts to advance plastic-friendly  
17 legislation in the State. As recently as within the last year, ExxonMobil targeted online  
18 advertisements to Californians regarding "advanced recycling." ExxonMobil has funded  
19 numerous lobbying efforts, directly and through trade associations and industry groups, to defeat  
20 regulations that would reduce the harm to humans and the environment from its plastic products  
21 in California and nationwide.

22 48. ExxonMobil has also sought to establish business connections under its  
23 "advanced recycling" program with California municipalities.

24 49. Finally, ExxonMobil has supplied substantial quantities of fossil fuel products  
25

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26 <sup>9</sup> Through this Complaint, the People of the State of California are not challenging  
27 "lobbying efforts" per se, but rather this action challenges the illegal acts in violation of  
California law that may be connected to these lobbying efforts. These lobbying efforts also  
exemplify ExxonMobil's significant contacts with California.

28 <sup>10</sup> Extended producer responsibility ("EPR") is a policy of assigning the end-of-life  
responsibilities and costs of a product to the producer of that product.

1 to California. Currently, ExxonMobil promotes, markets, and sells gasoline and other fossil fuel  
2 products to California consumers through approximately 600 Exxon- and Mobil-branded  
3 petroleum service stations in California.

4 50. Venue is proper in this Court pursuant to California Code of Civil Procedure  
5 section 394 because Defendants conduct business in San Francisco County and throughout  
6 California, and the violations of law and the public nuisance alleged in this Complaint occurred in  
7 San Francisco County and throughout California.

## 8 **II. EXXONMOBIL'S DECEPTIVE MARKETING IN CALIFORNIA.**

9 51. ExxonMobil purposefully directed deceptive conduct toward California by  
10 marketing, advertising, and promoting petrochemical plastics products as sustainable.  
11 ExxonMobil made statements in furtherance of its campaign of deception about the efficacy of  
12 plastic recycling, including about "advanced recycling," and affirmatively promoted recycling  
13 technology as able to solve the plastic waste and pollution crisis. ExxonMobil made these  
14 statements knowing that plastic recycling is inadequate to stop or reverse the plastic waste and  
15 pollution crisis. These statements were designed to conceal and mislead consumers, including the  
16 State, its businesses, and its residents about the serious adverse consequences that would result  
17 from continued use of plastic products, including ExxonMobil's virgin and/or recycled plastics  
18 materials and products containing those materials.

19 52. ExxonMobil promoted plastic recycling in a manner that directly and  
20 foreseeably impacted and continues to impact California, with knowledge that the intended use of  
21 its plastic products harmed and will continue to harm California and elsewhere. ExxonMobil  
22 purposefully directed its misleading conduct to reach the State, its businesses, and its residents, to  
23 promote the continued and unabated use of plastics products, including ExxonMobil's plastics  
24 products, in California and elsewhere. These deceptions have resulted in significant injuries in the  
25 State while increasing sales to ExxonMobil.

26 53. Over the past several decades and continuing to the present day, ExxonMobil  
27 and/or its agents, servants, alter-egos and/or abettors named above ran extensive print, radio,  
28 television, online, social media, and outdoor advertisements in the California market that

1 deceptively promoted recycling technology as a key solution that would reverse or substantially  
2 mitigate those harms.

3 54. Since at least 1988, ExxonMobil has deceptively promoted recycling as a key  
4 solution to the plastic waste and pollution crisis in print publications circulated widely to  
5 California consumers, including but not limited to: *San Francisco Examiner*, *Los Angeles Times*,  
6 *Sacramento Bee*, *Oakland Tribune* (now known as the *East Bay Times*), *Victorville Daily Press*,  
7 *Simi Valley Star Enterprise*, *Lompoc Record*, *Signal*, *Record Searchlight*, and numerous other  
8 California newspapers, as well as national publications with strong circulation in California,  
9 including but not limited to *The New York Times*.<sup>11</sup> ExxonMobil has also used social media  
10 platforms with a significant user base in California, including but not limited to Meta (Facebook),  
11 X (formerly Twitter), and YouTube, to spread misinformation about the efficacy of plastics  
12 recycling at a scale to address the plastics waste and pollution crisis. As further detailed below,  
13 these campaigns have included advertisements containing false or misleading statements,  
14 misrepresentations, and/or omissions designed to encourage the consumption of plastics products,  
15 including ExxonMobil's plastics products, by falsely reassuring consumers that they can continue  
16 using plastics because recycling, including "advanced recycling," is an effective solution to the  
17 plastic waste and pollution crisis, and/or misrepresenting ExxonMobil's products or ExxonMobil  
18 itself as environmentally friendly.

19 55. ExxonMobil, through vertically integrated segments and divisions, furthers its  
20 campaign of deception by: (1) misrepresenting the recyclability of plastics; (2) omitting or  
21 misstating the limited availability and efficacy of plastic recycling; and (3) affirmatively  
22 promoting the company's plastic-input products as recyclable and/or made from recycled plastics.  
23 ExxonMobil furthers this deception despite knowing the inadequacy and unavailability of plastic  
24 recycling at scale and the human and environmental harms that necessarily result from the  
25 intended use of ExxonMobil's plastic-input products.

26  
27 <sup>11</sup> Exxon has a long history, dating back to 1970, of running influential advertising  
28 campaigns framed as public interest opinion editorials in major national newspapers including  
*The New York Times*, *Washington Post*, *Wall Street Journal*, *Chicago Tribune*, and *Los Angeles Times*. For many years, these advertisements ran weekly.

56. ExxonMobil, by and through industry groups and other organizations, worked to conceal and misrepresent the known dangers of plastic; to knowingly withhold material information regarding the consequences of using plastic products, the inefficacy of plastics recycling; the infeasibility of plastic recycling to meaningfully scale, and the proportion of its “certified circular polymers” actually sourced from recycled plastic waste materials; and to spread knowingly false and misleading information to the public regarding the efficacy of plastics recycling at a scale to address the plastics waste and pollution crisis.

57. ExxonMobil, through its own actions and through its membership and participation in industry groups, engaged in this longstanding campaign to promote continued and increased use of plastics products, including ExxonMobil’s plastics petrochemical products, which it knew would result in injuries to the State and elsewhere.

58. ExxonMobil and DOES 1-100 (collectively, “Defendants”) committed substantial acts to further its deceptive practices in California by making affirmative misrepresentations or omissions to California consumers about the existence, causes, and effects of plastic pollution and the efficacy of recycling; and by affirmatively promoting plastics products, including ExxonMobil’s plastics petrochemical products, as safe and environmentally friendly. Defendants committed this deception with knowledge of the extremely harmful impacts that would result from the intended and foreseeable use of those products. A substantial effect of Defendants’ actions has and will occur in California, as the State has suffered and will suffer injuries from ExxonMobil’s wrongful conduct. ExxonMobil knew—based on information provided to it from its internal research divisions, affiliates, trade associations, and industry groups—that its actions in California and elsewhere would result in these injuries in and to the State. Finally, the harmful effects described herein are the direct and foreseeable results of ExxonMobil’s conduct in furtherance of the conspiracy.

## FACTUAL BACKGROUND

### **I. EXXONMOBIL IS SUBSTANTIALLY RESPONSIBLE FOR CAUSING AND EXACERBATING THE PLASTIC WASTE AND POLLUTION CRISIS, WHICH IS CAUSING DEVASTATING HARM.**

#### **A. The Plastic Waste and Pollution Crisis.**

59. ExxonMobil is the world's largest producer of plastic polymers, the building blocks of single-use plastics that become plastic pollution.

60. The excessive amount of plastic waste and pollution is one of the most serious environmental crises confronting California and the planet today.<sup>12</sup> Plastic pollution is proliferating in oceans, seas, rivers and lakes, accumulating at or near the surface, on lake and ocean bottoms, and along riverbanks and shorelines.<sup>13</sup> And plastic waste has found its way into every corner of the globe—from remote marine environments<sup>14</sup> to the deepest point of the ocean floor, on the highest mountains, in rock formations, and floating in the air.<sup>15</sup> According to the U.S. Environmental Protection Agency's (EPA) latest estimates, approximately 23 percent of global plastic waste was improperly disposed of, burned (creating harmful and toxic emissions), or leaked into the environment in 2019.

61. Widespread production and promotion of single-use plastic has led to persistent plastic leakage into the environment.<sup>16</sup> Around the world each year, an estimated 11 million tonnes of plastic waste become aquatic pollution and 18 million tonnes are polluted to land. Together, that is the equivalent of four garbage trucks of plastic waste polluted in the water or land *every minute*.<sup>17</sup> In the United States—even with its advanced solid waste management system—as much as 1.45 million tonnes of plastic was polluted to the ocean in 2016.<sup>18</sup> Plastic products account for approximately 85 percent of total marine waste and between 70 to 80

<sup>12</sup> Merkl and Charles, The Minderoo Foundation, *The Price of Plastic Pollution: Social Costs and Corporate Liabilities* (2022) p. 7 (hereafter Minderoo 2022).

<sup>13</sup> Corcoran et al., *An Anthropogenic Marker Horizon in the Future Rock Record* (2014) 24 GSA Today 4.

<sup>14</sup> Trainic et al., *Airborne Microplastic Particles Detected in the Remote Marine Atmosphere* (2020) 1 Communications Earth and Environment 64.

<sup>15</sup> World Health Organization, *Dietary and Inhalation Exposure to Nano- and Microplastic Particles and Potential Implications for Human Health* (2022) pages 13-44.

<sup>16</sup> Organization for Economic Cooperation and Development (OECD), *Plastic Pollution is Growing Relentlessly as Waste Management and Recycling Fall Short, Says OECD* (Feb. 22, 2022) <<https://www.oecd.org/environment/plastic-pollution-is-growing-relentlessly-as-waste-management-and-recycling-fall-short.htm>> (as of July 29, 2024).

<sup>17</sup> Lau et al., *Evaluating Scenarios Toward Zero Plastic Pollution* (2020) 269 Science 1455.

<sup>18</sup> Law et al., *United States' Contribution of Plastic Waste to Land and Ocean* (2020) 6 Science Adv. 2375.

1 percent of all waste that ends up on land or in marine environments combined.<sup>19</sup>

2 62. In California, from 1990 to 2022, an astounding 2.7 to 3.3 million tonnes of  
3 plastic waste escaped into California's environment. In 2022 alone, estimates of the amount of  
4 plastic waste leaked to land and into the ocean in California ranged from 121,324 to 179,656  
5 tonnes—the equivalent of dumping 20 to 30 garbage trucks of plastic waste *per day* into  
6 California's landscapes and waterways.

7 63. The steep increase in plastic production over the past 60 years, as depicted in  
8 Figure A, created a dramatic increase in plastic waste: in the United States, plastic increased as a  
9 percent of municipal solid waste (by mass) from 0.4 percent in 1960 to 12.2 percent in 2018.<sup>20</sup> An  
10 estimated 44 million tonnes of plastic waste were generated in the United States in 2019.  
11 Meanwhile, the plastic recycling rate in the United States in 2019 was estimated to be a mere five  
12 percent. As new plastic production relentlessly rises, the generation of plastic waste inevitably  
13 increases.

14 64. Nearly two-thirds of total plastic waste comes from products that are discarded  
15 within five years of purchase, such as packaging (40 percent), consumer products (12 percent),  
16 and textiles (11 percent).<sup>21</sup> Single-use plastics—plastic packaging, bags, straws, and disposable  
17 plasticware and utensils—represent the largest plastics application, and account for one-third of  
18 all plastics consumed globally.<sup>22</sup>

19 65. Single-use plastics comprise most of the plastic waste that escapes and/or is  
20 discharged into the environment.<sup>23</sup> Rising production of single-use plastics and the consequent  
21 rise of plastic waste and pollution has contributed to such phenomena as the “great Pacific  
22 garbage patch,” consisting of several vast swirling gyres of floating plastic pieces dispersed over

23  
24 <sup>19</sup> U.S. Environmental Protection Agency, Draft National Strategy to Prevent Plastic  
Pollution (2023).

25 <sup>20</sup> Com. on the U.S. Contributions to Global Ocean Plastic Waste, Nat. Academy  
26 Sciences, Engineering, and Medicine, Reckoning with the U.S. Role in Global Ocean Plastic  
Waste (2022) page 3. (Additionally, the generation of municipal solid waste in the United States  
has increased significantly over the past 60 years).

27 <sup>21</sup> Organization for Economic Cooperation and Development (OECD), *Plastic Pollution is  
Growing Relentlessly as Waste Management and Recycling Fall Short*, *supra*.

28 <sup>22</sup> Minderoo 2023, *supra*, page 17.

<sup>23</sup> *Ibid*.

1 a huge surface of the Pacific Ocean and throughout the upper portion of the ocean column.

2 66. Plastic pollution has pervasive consequences at the local, regional, and state  
3 levels in California, for the environment, the state's unique natural and recreational resources, the  
4 economy, and potentially for human health.<sup>24</sup> Plastic pollution causes substantial, persistent, and  
5 ongoing harm to California's unparalleled coastal recreational resources, residents, tourism, and  
6 local economies.<sup>25</sup> Plastic waste visibly pollutes California's beaches, rivers, waterways and  
7 marine environments, fouls recreational areas, and threatens marine life and sensitive habitats and  
8 ecosystems.<sup>26</sup>

9 **Figure D: Ballona Creek leading to Santa Monica Bay (Photo Credit: Bill MacDonald,  
10 Algalita Research Foundation)**



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22 67. Plastic waste has devastating effects on California's wildlife. Plastic waste  
23 entangles and endangers California marine life, including seals, sea birds, sea turtles, whales, and  
24 dolphins, resulting in hindered movement, decreased feeding ability, injury, and death.<sup>27</sup> Plastic

25  
26 <sup>24</sup> Cal. Ocean Protection Council and Nat. Oceanic and Atmospheric Admin. Marine  
Debris Program, California Ocean Litter Prevention Strategy: Addressing Marine Debris from  
Source to Sea (2018) page 10 (hereafter, OPC 2018).

27 <sup>25</sup> *Id.* at page 38.

28 <sup>26</sup> *Id.* at page 10.

<sup>27</sup> *Id.* at page 37.

waste is ingested by California raptors and sea birds, with devastating impacts on bird fitness and survival. Plastic waste smothers sensitive coastal and wetland habitats,<sup>28</sup> including coral reefs and salt marshes, and disrupts growth and surface cover.<sup>29</sup> Plastic debris inhibits the growth of aquatic vegetation, decreasing spawning areas and habitats for fish and other living organisms, threatening marine biodiversity and the food web.<sup>30</sup>

68. Even managed plastic waste contributes to plastic pollution of the environment. As plastic waste degrades in landfills, microplastics are released into the surrounding environment, including contamination of soil, groundwater, and surface water by air and by leachate.<sup>31</sup>

69. Once plastic waste enters the environment as pollution, it is long-lived, cumulative, friable, and mobile, and can have substantial negative impacts on a wide range of freshwater, marine, and terrestrial species. Removing plastics from the environment becomes difficult and costly as plastics fragment into smaller and smaller pieces.

#### **B. The Microplastics Pollution Crisis.**

70. Plastics do not biodegrade.<sup>32</sup> Exposed to the elements, plastics that have leaked into the environment inevitably disintegrate into smaller and smaller pieces until they eventually become “microplastics,” tiny plastic bits measuring five millimeters or less, that are readily transported by air, wind, water, and the fecal matter of organisms that ingest them. Microplastic pollution has been identified as one of the most widespread and long-lasting anthropogenic changes to the surface of the Earth, and a great threat to a wide range of species and ecosystems.

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<sup>28</sup> *Id.* at page 5.

<sup>29</sup> *Id.* at page 37.

<sup>30</sup> Thevenon et al., Internat. Union for Conservation of Nature, Plastic Debris in the Ocean: The Characterization of Marine Plastics and their Environmental Impacts, Situation Analysis Report (2015) page 17.

<sup>31</sup> Leachate is a solution or product obtained by leaching, especially from landfills or other sources.

<sup>32</sup> Plastic materials do not exist in nature, and therefore there are no naturally occurring organisms that can break them down effectively or at all. It is estimated that under normal conditions in nature, plastic bottles will begin to break down only after 500-700 years; plastic bags will begin to break down only after a thousand years, and even then, the process will be very slow.

71. Microplastics have been detected in the deep sea, in freshwater bodies, and groundwater; in soils and in sediments; on mountaintops; and in the air we breathe. Microplastics are ingested by marine organisms,<sup>33</sup> and have been found in fish and other aquatic species, with observed adverse effects including altered feeding habits, tissue inflammation, impaired growth, developmental anomalies, and reductions in reproductive success.<sup>34</sup>

72. Microplastics can be particularly dangerous to wildlife; when eaten, microplastics have been found to accumulate inside an animal's body, causing a variety of critical health issues. Microplastics have been found to both absorb and adsorb<sup>35</sup> toxic chemicals that are harmful to aquatic life. Laboratory studies show that chemicals released from microplastics can transfer up the food chain, potentially affecting the health of species at all levels of the ecosystem.

73. On land, microplastics have been found in the guts and feces of a variety of land-based wildlife, including birds, small mammals, and insects. Ingestion of microplastics has negative impacts on the health of these species, including reducing fitness and altering immune system functions.<sup>36</sup>

74. Microplastic pollution has been identified as an emerging global threat to terrestrial ecosystems, remaining persistent and mobile in soil environments. Microplastics affect soil biota, decrease seed germination, and inhibit plant growth and productivity. Microplastic contamination of agroecosystems can reduce food yields, and negatively impact food chain components and food security. Once dispersed into the environment, microplastics are almost impossible to eradicate.

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<sup>33</sup> OPC 2018, *supra*, at pages 5, 10.

<sup>34</sup> Sarkar et al., *Microplastic Pollution: Chemical Characterization and Impact on Wildlife* (2023) 20 Internat. J. Environmental Research and Public Health 1745; see also Besseling et al., *Effects of Microplastic on Fitness and PCB Bioaccumulation by the Lugworm Arenicola marina* (L.) (2012) 47 Environmental Science & Technology 593; Cal. Ocean Protection Council, Statewide Microplastics Strategy (2022) page 4 (hereafter OPC 2022).

<sup>35</sup> "Adsorb" means to take up and hold or attach to the surface of another substance.

<sup>36</sup> Sarkar et al., *supra*.

**C. Microplastics Likely Have Negative Human Health Consequences.**

75. As studies emerge regarding the effects of microplastics on human health, they point to potentially dire consequences. Humans are exposed to microplastics predominantly through inhalation of tiny plastic particles suspended in indoor and outdoor air, and through ingestion of microplastic particles found in water, food, and other beverage sources.<sup>37</sup> A 2018 study of 259 bottled water samples across 19 different locations in nine countries, including the U.S., found 93 percent were contaminated with microplastic—on average, 10.4 microplastic particles per liter.<sup>38</sup> Other studies have found microplastics in globally sourced tap water samples, American-made beer, and commercial sea salt.

76. Once inhaled or ingested by humans, microplastic particles have been found to lodge in the respiratory or digestive tract.<sup>39</sup> Particles can then be absorbed through the small intestine and lungs and distributed throughout the body to other organs via the circulatory system. Microplastics have been found accumulating in the human gut, lungs, and bloodstream. Even more alarming are recent discoveries of microplastics in the human reproductive system, such as the male testis, mammary glands (breastmilk), and placental tissue. Studies are finding evidence that microplastics can enter human cells and can even cross the blood-brain barrier in mammals.

77. Microplastics' physical presence in the human body has been associated with chronic inflammation, oxidative stress, and cytotoxicity (potentially increasing cancer risk). Studies also indicate that chemicals adsorbed by microplastics consumed by people through food or other routes of exposure can desorb in the human body and have toxic impacts. Some chemical additives to plastic, such as phthalates, bisphenol A (BPA), and per- and polyfluoroalkyl substances (PFAS), are recognized as toxic chemicals that impact the endocrine, reproductive, and other systems.<sup>40</sup>

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<sup>37</sup> World Health Organization, *supra*, at pages 13-44.

<sup>38</sup> Mason et al., *Synthetic Polymer Contamination in Bottled Water* (2018) 6 *Frontiers in Chemistry* 407.

<sup>39</sup> World Health Organization, *supra*, at pages 13-44.

<sup>40</sup> UNEP, *From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution* (2021).

78. A recent study found that patients with carotid artery plaque in which microplastics were detected had a higher risk of a composite of myocardial infarction, stroke, or death (from any cause) than those patients in whom microplastics were not detected. Other studies indicate that microplastics particles can be vectors for disease or other toxic transmission because they can adsorb and transmit human pathogenic microbes, parasites, or other contaminants when inhaled or ingested by humans.

79. Published research also points to wide-ranging potential neurotoxicity, pulmonary toxicity, hepatotoxicity, cardiotoxicity, reproductive toxicity, and nephrotoxicity in human beings resulting from microplastics exposure. While the full health effects of human exposure to microplastics and the potential for accumulation of microplastics in human tissues remain unknown, the existing research indicates potentially severe, and even deadly, impacts.

**D. ExxonMobil Substantially Contributes to the Plastic Waste and Pollution Crisis.**

80. ExxonMobil produces the primary chemicals and polymers used to produce plastic and styrofoam products such as bottles, cups, plates, utensils, take-out containers, and packaging designed for single-use that are sold throughout the United States and in California. ExxonMobil considers the production of these polymers as the “core” of its chemicals and products portfolio and sees 80 percent of its growth potential as “dependent on single-use plastics applications.”

81. ExxonMobil produces more virgin polymers bound for single-use plastic production than any other petrochemical company,<sup>41</sup> and is the world’s largest contributor to single-use plastic waste.<sup>42</sup> ExxonMobil’s polymer products are used to make the plastic items most commonly and consistently picked up on California shorelines, including food wrappers and takeout containers; caps and lids; plastic bags; cups, utensils and plates; straws and stirrers; and beverage bottles. These are among the top 10 categories of debris items consistently picked up on California beaches and riverbanks on Coastal Cleanup Day over the past 34 years. ExxonMobil’s

<sup>41</sup> Minderoo 2023, *supra*.

<sup>42</sup> *Id.* at page 12.

polymer products are also used to make six-pack beverage rings and mylar balloons, items that commonly blight California shorelines and parks.

82. The inescapable consequence of ExxonMobil producing billions of pounds of plastic is the plastic waste and plastic pollution crisis. There is a direct relationship between the rise in plastic production and the rise in plastic pollution—a recent comprehensive study of plastic pollution audits in *Science Advances* found “a 1% increase in [plastic] production, result[s] in approximately a 1% increase in branded plastic pollution.” The study compiled over 1,500 audits of over 1.8 million plastic items and concluded that waste management is insufficient to stop plastic pollution. Instead, “reduced plastic production is a primary solution to curb plastic pollution,” and that, in particular, “[p]hasing out single-use and short-lived plastic products by the largest polluters would greatly reduce global plastic pollution.”

83. California has identified source reduction as one of the top priorities for addressing this plastic pollution crisis.<sup>43</sup> Source reduction will reduce the burden on waste management systems and prevent plastic waste from reaching the environment.<sup>44</sup>

84. California has borne the burden of the harmful economic, environmental, and potential human health impacts of ExxonMobil’s deceptions, which have resulted in the deluge of plastic waste, while ExxonMobil has recorded record profits (\$36 billion in profits in 2023). Indeed, as stated above, ExxonMobil recently opposed a shareholder proposal to issue a report on how reducing virgin plastic production to reduce ocean plastic pollution would affect ExxonMobil’s financial position in 2022.

## **II. FOR DECADES, EXXONMOBIL DECEPTIVELY PROMOTED MECHANICAL RECYCLING AS THE SOLUTION TO THE PLASTIC WASTE AND POLLUTION CRISIS.**

85. Particularly after the Great Depression, Americans were not accustomed to the concept of throwing anything away. To change this behavior, in the 1950s and 1960s, ExxonMobil’s predecessor companies actively sought to normalize single-use plastic products. They were successful. Demand for plastic products began to rise but so did the inevitable

<sup>43</sup> OPC 2022, *supra*; OPC 2018, *supra*. Source reduction refers to a net reduction in the generation and production of plastic waste. See Public Resources Code section 40196.

<sup>44</sup> OPC 2022, *supra*; OPC 2018, *supra*.

1 pollution. By the late 1960s and 1970s, the public began demanding action to reduce or eliminate  
 2 production of plastic products. In response, ExxonMobil's predecessors participated in industry-  
 3 wide efforts to promote so-called "solutions" to plastic waste such as landfilling and incineration.  
 4 When these efforts were unsuccessful at quelling public outcry, a small number of petrochemical  
 5 companies including Exxon and Mobil began a decades-long campaign that began in the 1980s to  
 6 convince the public that mechanical recycling would solve the plastic waste and pollution crisis.  
 7 This campaign, which is ongoing today, succeeded in convincing the public that plastics were  
 8 recyclable. This gave ExxonMobil cover for decades to continue producing more and more  
 9 plastic unchecked. All the while, the plastic recycling rate has never broken nine percent, even  
 10 when the U.S. was exporting massive amounts of plastic waste to China under the guise of  
 11 recycling.

12 **A. ExxonMobil Encouraged the Public to Live a Throw-Away Lifestyle and**  
 13 **Normalized the Consumption of Unnecessary Single-Use Plastics to Fuel**  
 14 **Demand for ExxonMobil's Plastic Products.**

15 86. ExxonMobil and the plastics industry have promoted plastics to Americans for  
 16 decades. The Society of the Plastics Industry (SPI), of which Exxon and Mobil were each  
 17 members (before they merged to become ExxonMobil), formed in 1937 for the primary purpose  
 18 of building public acceptance of plastics.

19 87. Initially, SPI and the plastics industry promoted the durability of plastics.<sup>45</sup>  
 20 However, "it didn't take long for the industry to recognize that disposables were the route to  
 21 growth, and for a prosperous public to get comfortable with the idea of throwing plastic  
 22 packaging away."<sup>46</sup> When disposable plastic cups first became available, people would save and  
 23 re-use them, but the industry confidently predicted that "[i]t is only a matter of time until the  
 24 public accepts the plastics [sic] cups as more convenient containers that are completely  
 25 discardable."<sup>47</sup> Manufacturers of all kinds marketed the disposable commodity "under the  
 26 alluring dual banner of cleanliness and convenience."<sup>48</sup>

27 <sup>45</sup> Freinkel, *Plastic: A Toxic Love Story* (2011) page 145.

28 <sup>46</sup> *Ibid.*

<sup>47</sup> Rogers, *Gone Tomorrow: The Hidden Life of Garbage* (2005) page 122.

<sup>48</sup> *Id.* at page 115.

88. The plastics industry decided to convince the public that plastic products were necessary. “Not a single solid market for plastics in existence today was eagerly waiting for these materials.”<sup>49</sup> But as time went on, plastics replaced natural materials and often became the only choice available to consumers, regardless of actual consumer preferences.<sup>50</sup>

**Figure E: Life Magazine Depicting the Throw Away Culture That Was Promoted from 1955 Previewing a Consumer Market and Society Flooded with Single-Use Plastic**



89. “At the SPI’s [ ] 1956 national conference, participants were told that ‘developments should be aimed at low cost, big volume, practicability, and *expandability*.’ In short, the producers’ aim should be for their products to end up ‘in the garbage wagon.’”<sup>51</sup> Reusable packages could account for thousands of units sold, but those “used once and thrown

<sup>49</sup> Freinkel, *supra*, at page 142 (quoting a June 1956 article in the trade journal *Modern Plastics*).

<sup>50</sup> Rogers, *supra*, at page 123.

<sup>51</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling: How Big Oil and the Plastics Industry Deceived the Public for Decades and Caused the Plastic Waste Crisis* (Feb. 2024) page 5 (quoting *Plastics in Disposables and Expendables* (1957) 34 *Modern Plastics* 93 [emphasis in original]).

1 away” represent “an everyday recurring market measured by the *billions* of units.” The same  
2 speaker praised the industry seven years later for “filling the trash cans, the rubbish dumps and  
3 the incinerators with literally billions of plastic bottles, plastic jugs, plastic tubes, blisters and skin  
4 packs, plastic bags and films and sheet packages—and now even plastic cans. The happy day has  
5 arrived when nobody any longer considers the plasticss [sic] package too good to throw away.”

6 90. Both Exxon and Mobil have been leaders in plastic production since at least the  
7 1960s. Mobil (pre-merger) formed the Mobil Chemical Company in 1960, a new division of  
8 Mobil that was tasked with carrying out the company’s petrochemical activities. By 1966, Mobil,  
9 the “leading producer of polyethylene film[,] . . . had already developed an extensive line of  
10 substitutes for paper packaging. Its bag-on-a-roll had replaced paper sacks in grocers’ produce  
11 sections and its Hefty trash bags helped alter people’s longtime habit of lining their garbage pails  
12 with newspaper.”<sup>52</sup>

13 91. As of 1969, Mobil invented a range of consumer products that used its plastic  
14 polymers, most of which were intended to be thrown away, ranging all the way from plastic  
15 squeeze bottles to automobile parts.” This included selling polystyrene “Mobilfoam” egg cartons  
16 and developing BICOR (“a Mobil-developed family of oriented polypropylene films”), a  
17 replacement for cellophane. Around this time, Mobil began a heavy marketing campaign to  
18 promote plastics. Mobil’s advertisements appeared as announcements on NBC’s *Today* and  
19 *Tonight* shows, offering coupons for purchase of Hefty trash can liners.

20 92. By the 1970s, Mobil owned ten plastics packaging plants in the United States.  
21 Mobil’s plastic production facilities included a polystyrene plant in Bakersfield, California and a  
22 polyethylene film plant in Woodland, California. Additionally, Mobil’s ethylene plant in  
23 Beaumont, Texas, produced a key building block for plastics. Mobil added a polyethylene plant in  
24 Beaumont in the mid-1970s. Mobil boasted it was “number 1 in disposable plastics.”

25 93. In the late 1970s, Mobil invented even more additional plastic products  
26 designed to replace existing products made out of other materials—plastic grocery sacks, plastic  
27 shopping bags, and containers for fast food. Mobil additionally created disposable foam plates

28 <sup>52</sup> Freinkel, *supra*, at page 143.

1 and drinkware under the Hefty brand as well as a new stretch film—Mobilrap X stretch film. In  
2 1971, Mobil held a “Bag Your Trash” promotion in 60 cities to encourage the use of plastic trash  
3 can liners. Mobil encouraged the public to purchase and/or use these and other plastic products,  
4 all of which were designed for a single use and then tossed.

5 94. Mobil also created novel plastic products that did not necessarily have an  
6 existing equivalent, but nevertheless provided a use for Mobil’s burgeoning plastic production.  
7 Examples include Mobil’s “Guestware,” a line of disposable polystyrene avocado-green  
8 dinnerware designed to be presentable for guests without the work of washing dishes, or the  
9 “Hefty Fashion Plate,” a premium version of the regular Hefty disposable plates. Through the  
10 creation of such products, Mobil encouraged consumers to habitually rely on and dispose of  
11 plasticware rather than reusable products, sustaining Mobil’s plastic business.

12 95. Exxon and Mobil promoted the use and disposal of plastic products through the  
13 Society of the Plastics Industry (SPI). SPI, at its annual meeting, reported that it deployed a  
14 female employee to women’s groups in the Midwest to explain the benefits of plastics. The  
15 plastics industry’s efforts were specifically directed to making plastics more appealing,  
16 encouraging a “throw away” culture, and focusing on anti-litter laws to shift the plastic waste and  
17 pollution crisis to consumers.

18 96. Mobil expanded its production and promotion of plastic products marketed for  
19 single use in the 1980s and 1990s. By the late 1980s, Mobil was leading the plastics industry’s  
20 replacement of paper grocery bags with plastic grocery sacks and led the industry in the  
21 manufacture and sale of pallet-wrap stretch film. Mobil sold more than 20 billion plastic bags a  
22 year as of 1987.

23 97. Mobil enlisted children participating in Boy Scouts of America to sell Hefty  
24 trash and kitchen bags and distribute coupons for future purposes, as a fundraiser for their  
25 scouting troops. A scientist from Exxon met with more than 2,000 students and other community  
26 members to teach the students that plastic packaging is better for the environment than other  
27 materials. The industry also made efforts to disseminate pro-plastics and plastic recycling  
28 information to educators and students. For instance, the Council for Solid Waste Solutions

1 proposed two programs to inform teachers how to educate students about plastics in an effort to  
2 ward off teachers' and students' "efforts to boycott—and even ban—some plastics products,  
3 based on misleading and incorrect information." In another instance, the Vinyl Institute published  
4 a booklet entitled "Plastics in the Waste Stream: Options for Practical Solid Waste Management"  
5 for teachers to utilize.

6 98. Mobil acquired U.S. marketing rights for Baggies food storage bags in 1983,  
7 which it previously produced for Colgate Palmolive. Mobil also developed new films for  
8 wrapping candy bars, chips, and snack foods, changing the way these common products were  
9 packaged for decades in the future. Thirty-five percent of the sales of Mobil's new oriented  
10 polypropylene (OPP), originally designed for packing candy, snacks, and similar items, were for  
11 "products that didn't even exist five years ago." Mobil asserted that OPP was environmentally  
12 friendly because it did not take up much space in landfills. Yet, Mobil's production of OPP was  
13 growing by eight percent a year and Mobil predicted that its worldwide production would exceed  
14 400 million pounds a year by 1994 despite knowing that these products would end up in landfills.

15 99. Mobil continued to expand its lines of single-use plastic dishes, such as Hefty  
16 plates with new designs and patterns, the sturdier "Placesetter" line of dishes, and hinged-lid  
17 polystyrene containers for food items. In 1985, Mobil worked with McDonald's to develop a  
18 menu item based on specialized Mobil polystyrene packaging—a dual-chambered container that  
19 had a "hot side" for the burger itself and a "cool side" for the lettuce and tomato toppings.

20 100. Mobil purchased Tucker Housewares, manufacturer of plastic houseware  
21 products, in 1990. In 1991, Mobil marketed 35 new products, including resins (a substance  
22 typically converted into polymers) and new packaging films. And in 1993, Mobil created a new  
23 line of plastic, microwaveable containers. Mobil also continued to market and expand sales of its  
24 existing product lines, expanding manufacturing capacity for its Hefty bags, plastic grocery bags,  
25 and foam plates.

26 **B. ExxonMobil Knew that Its Promotion and Production of Plastic Products**  
27 **for a Throw-Away Lifestyle Caused a Solid-Waste Crisis Without a**  
28 **Solution.**

101. Exxon's and Mobil's success in promoting disposable products and single-use

1 plastics in the 1950s and 1960s resulted in foreseeable consequences.<sup>53</sup> By the late 1960s,  
 2 ecological concerns threatened the plastics industry.<sup>54</sup> “Ecological concerns increased so steadily  
 3 after the first Earth Day of 1970 that insiders feared the crisis might ‘really end the industry.’  
 4 Plastics’ reputation was worsening even as the stuff itself flowed from refineries and molding  
 5 plants at an ever increasing rate.”<sup>55</sup> In 1971, author Barry Commoner wrote about the  
 6 indestructability of plastics: “it was ‘sobering,’ he wrote, ‘to contemplate the fate of the billions  
 7 of pounds of plastics already produced.’”<sup>56</sup>

8 102. Indeed, by the early 1970s, disposable and single-use plastics were named as a  
 9 cause of the developing plastic waste and pollution crisis.<sup>57</sup> As plastic waste seeped into the  
 10 environment, a worried public began pushing for restrictions and bans. Plastics industry insiders  
 11 denied blame for the plastic waste and pollution crisis. Yet the industry, including Mobil and  
 12 Exxon, realized that they needed to convince the public that the problem was under control—or at  
 13 least make the public *believe* that this was the case.

14 103. Otherwise, Exxon, Mobil, and other plastics producers could face restrictions  
 15 on productions. *Modern Plastics*, a prominent plastics industry journal, warned companies of the  
 16 possibility that “well meaning but misinformed authorities step in with homemade remedies and  
 17 regulations,” and advised industry to figure out its own solution to avoid the pushback on  
 18 plastic.<sup>58</sup> SPI echoed this sentiment and encouraged its members, including Exxon Chemical and  
 19 Mobil Chemical, to band together:

20 We don’t want to sound like the prophet of doom, but we do feel it is necessary to  
 21 alert you to what we, as an industry, might face in the months ahead. It is even more  
 22 important that we unite all our forces to present a solid front in each and every area  
 23 critical to the industry’s continued success.

24 104. The plastics industry engaged in a public relations campaign to improve public

25 <sup>53</sup> Allen et al., Center for Climate Integrity, *supra*, at page 7.

26 <sup>54</sup> Meikle, American Plastic (1995) page 253.

27 <sup>55</sup> *Id.* at page 264 (citing Swissair advertisement as quoted in *Answering the Critics* (May 1980) 57 *Modern Plastics* 34).

28 <sup>56</sup> *Ibid.*

<sup>57</sup> Allen et al., Center for Climate Integrity, *supra*, at page 6.

<sup>58</sup> Meikle, *supra*, at page 265 (quoting Frados, *There’s Something in the Air* (1966) 4 *Modern Plastics* 89).

1 perception of plastic and plastic waste. Mobil and Exxon actively denied, through SPI, that  
2 plastics materials caused environmental pollution or harm.

3 105. Alarming, internal documents from 1973 between SPI and its Public Affairs  
4 Council reveal that the industry called individuals and groups concerned about plastic waste and  
5 harms its “enemies”:

6 [W]e completed the most extensive study of what the various publics think of  
7 plastics.... It was aimed at our environmental problems, of course—better defining  
8 them, determining what **segments of the population are our “enemies”** and where  
9 they get their misinformation.... We have been able to pinpoint problem areas,  
10 problem people and problem press, and have begun our programs to get at the  
11 minority which may mold majority opinion if ignored.

12 106. To assuage the public outcry, Mobil advertised in 1973 that “the plastics  
13 industry is at work on a number of projects designed to turn waste into something useful. One  
14 promising project involves mixing plastic scraps in concrete. The result is a material that’s as  
15 strong as conventional concrete, but up to 15 percent lighter.” The project Mobil referred to was a  
16 bridge reinforced with 30 percent plastic waste that eventually collapsed into a river.

17 107. In the 1970s, Mobil’s Plastics Division formed an “Environmental Protection  
18 Group,” headed by Robert Barrett, to “develop and disseminate facts” about its plastic products to  
19 consumers and environmental groups, in response to what Mobil called “misinformation about  
20 plastic packaging materials.” Specifically, Mobil planned to undermine legitimate concerns by the  
21 public that burgeoning production of single-use plastic products would lead to environmental  
22 harm, by misleading the public into believing that solutions existed to address the waste created  
23 by Mobil’s products. But, as explained below, Mobil knew that the most developed solutions to  
24 addressing plastic waste at the time—incineration and landfilling—risked further harm to the  
25 environment.

26 **1. By the 1970s, the plastics industry was aware of the ocean plastics**  
27 **pollution crisis.**

28 108. The plastics industry, including Exxon and Mobil, was aware of ocean plastics  
pollution by the 1970s, and began attempts to show the public that it was working with nonprofits  
to study the issue. Yet, Exxon’s and Mobil’s public response was to blame others for the issue

1 while not taking any action.

2 109. By the 1970s, scientists were publishing studies and reports on the presence of  
3 ocean plastics pollution. A 1976 study discovered plastic in nine species of seabirds in Monterey  
4 Bay, California.<sup>59</sup> “Industrial pellets predominated in these birds, but they were also found to  
5 contain pieces of food wrap, foamed polystyrene, synthetic sponge and pieces of rigid plastic.”<sup>60</sup>

6 110. The plastics industry was also aware of ocean plastics pollution by the early  
7 1970s. In 1972, Edward J. Carpenter, of Woods Hole Oceanographic Institute, announced that he  
8 had discovered small pieces of plastic in the Long Island Sound “at a density of one to twenty  
9 samples per cubic yard of water.”<sup>61</sup> Carpenter—not wanting to embarrass the plastics industry  
10 and hoping to work together to solve the problem—privately approached SPI’s new executive  
11 vice president, Ralph L. Harding, Jr., to inform Harding that his discovery indicated that a plastic  
12 processor was dumping polystyrene resin in the Long Island Sound.<sup>62</sup> SPI then warily cooperated  
13 with Carpenter to identify the culprit and end the spills.<sup>63</sup>

14 111. Additionally, Exxon, Mobil, and the plastics industry knew as early as the  
15 1970s that plastics break down into the environment. SPI reported that degradation of plastic  
16 occurs when plastic is hit with ultraviolet radiation from sunlight, certain temperatures, moisture,  
17 air, and microorganisms.<sup>64</sup> SPI also acknowledged that “foam products will break down and  
18 ultimately disintegrate with exposure to sunlight and weather.”

19 112. Exxon, Mobil, and other SPI members additionally realized by the 1970s that  
20 the disintegration of plastics into the environment could have potentially serious environmental  
21 implications. As SPI explained, “[w]hen a material degrades, it releases products of  
22 decomposition that could contaminate water supplies.” Moreover, Exxon and Mobil understood  
23 that the consequences of this environmental contamination were unknown, even as both expanded

24 <sup>59</sup> Ryan, *A Brief History of Marine Litter Research*, in Bergmann et al., *Marine*  
25 *Anthropogenic Litter* (2015) page 8 (citing Baltz & Morejohn, *Evidence from Seabirds of Plastic*  
*Particle Pollution of Central California* (1976) 7 *Western Birds* 111).

26 <sup>60</sup> *Ibid.*

27 <sup>61</sup> Meikle, *supra*, at page 268.

28 <sup>62</sup> *Ibid.*

<sup>63</sup> *Ibid.*

<sup>64</sup> Glauz et al., *Society of the Plastics Industry and Society of Plastics Engineers, The*  
*Plastics Industry in the Year 2000* (Apr. 1973) page 8.

1 their production of plastics, as “[t]he possible biological consequences of widespread,  
2 uncontrolled degradation in this way need to be assessed.”

3 113. In 1973, the American Petroleum Institute, headed by Robert Barrett, studied or  
4 funded publications for the National Academy of Sciences workshop called “Inputs, Fates, and  
5 Effects of Petroleum in the Marine Environment.”<sup>65</sup> While the workshop’s focus was not on  
6 plastics, one paper stated, “[i]n coastal waters, polystyrene spherules are abundant. . . . Bacteria  
7 and polychlorinated biphenyls (PCB’s) are found associated with these particles, and the particles  
8 are ingested by a number of aquatic organisms.”<sup>66</sup> “These studies provided early evidence not  
9 only that plastics were accumulating in the ocean, but also that these plastics could serve as  
10 aggregators of other contaminants, making them more hazardous.”<sup>67</sup> The National Academy of  
11 Sciences also held another workshop in 1973 investigating marine litter, titled Assessing Potential  
12 Ocean Pollutants.<sup>68</sup> The report stated, “[p]lastic objects are prominent in reports of litter  
13 sightings although they are a minor component of the total refuse generated.”<sup>69</sup>

14 114. By the 1980s, SPI and the plastics industry as a whole were well aware of the  
15 ocean plastics pollution crisis.

16 115. By 1987, Congress was drafting bills to address ocean plastics pollution. The  
17 plastics industry was also monitoring congressional and state endeavors to address the issue. This  
18 included a letter SPI sent to its members discussing possible amendments to House of  
19 Representatives bill 940 (“Plastic Pollution Research and Control Act of 1987”) that would  
20 require the U.S. Environmental Protection Agency (EPA) to report information to Congress,  
21 including: “(1) an identification of the types and classes of plastic materials in the marine  
22 environment which are from land-based sources [and] (2) steps being taken by EPA to reduce the  
23 amount of plastic materials that enter the marine environment from those sources.”

24 116. The plastics industry was aware of ocean plastic pollution, but failed to offer

25 <sup>65</sup> Center for Internat. Environmental Law, *Fueling Plastics: Plastic Industry Awareness of*  
26 *the Ocean Plastics Problem* (2017) page 2.

26 <sup>66</sup> *Ibid.*

27 <sup>67</sup> *Ibid.*

27 <sup>68</sup> *Ibid* (citing Nat. Academy of Sciences, *Assessing Potential Ocean Pollutants* (1975) p.  
28 423).

<sup>69</sup> *Id.* at pages 2-3.

any workable solutions. Acknowledging the growing problem, SPI testified in 1987 at a U.S. Senate hearing on plastics pollution in the marine environment. SPI's Vice President of Government Affairs, Lewis R. Freeman testified that "SPI recognizes that the problem of proper disposal, particularly in the oceans, can sometimes create environmental problems." The Vinyl Institute, "as a division of [SPI], . . . [also] participate[d] in a number of industry wide programs established to address the issue of plastics in solid wastes, including the issue of marine pollution."

117. By 1988, the ocean plastics pollution crisis was so pronounced that SPI collaborated with the Center for Marine Conservation and the National Oceanic and Atmospheric Administration to publish "A Citizen's Guide To Plastics In The Ocean: More Than A Little Problem." The guide explained that the "[p]lastic debris found in the marine environment generally falls into two categories: manufactured plastic articles and plastic resin pellets." Further, the guide admitted that "[p]lastic trash in the ocean poses a growing threat for marine wildlife, and a problem for communities and use groups who depend on the ocean."

118. In the 1990s, the fact that plastics were escaping into the ocean was receiving increased attention. In 1990, SPI met with the EPA about EPA's concerns that plastic pellets were found in various U.S. coastal environments, suggesting wide contamination in the marine environment. EPA requested SPI's assistance surveying various plastics manufacturers, processors, and pellet transporters to assess how plastics are making their way into the environment. SPI planned to meet to discuss potentially taking voluntary action to address the issue and assumed that EPA would otherwise force the industry to do so.

119. Shortly after this warning, SPI launched "Operation Clean Sweep" to encourage the plastics industry to prevent losing pellets in the environment. Exxon hosted an "Operation Clean Sweep" conference on this issue in 1992. But the initiative was largely performative, only requiring participating companies to "watch videos, sign a form and promise not to lose any pellets," without any follow-up measures to ensure the project's success.<sup>70</sup>

<sup>70</sup> Sullivan, *Big Oil Evaded Regulation and Plastic Pellets Kept Spilling*, NPR (Dec. 22, 2020) <<https://www.npr.org/2020/12/22/946716058/big-oil-evaded-regulation-and-plastic-pellets-kept-spilling>> (as of July 29, 2024).

120. Mobil published an ad in *The New York Times* in 1994 titled “The coast (should be) clear.” While Mobil admitted that “[m]illions of pounds of debris wind up on beaches,” it continued to blame others for the debris, claiming “[d]ebris can come from the sea—trash dropped overboard from fishing vessels or ships—or it can come from the land-drainage system overflows or beach-goers.” Mobil discussed its “support” of a nonprofit organization, the Center for Marine Conservation, since 1986 by donating “several million trash bags to carry off the debris.”

**2. Exxon and Mobil first proposed landfilling and/or incineration of plastic waste.**

121. Against immense public backlash to plastic litter and under threat of regulation, the plastics industry proposed two potential “solutions” in the 1970s: landfilling and incineration. Landfilling addressed plastic litter and solid waste, while incineration addressed the public’s unease with making plastic packaging from petrochemicals during the 1970s energy crisis. Perceiving an urgent need to quell public outcry, Exxon and Mobil falsely claimed that plastic waste was being handled. Exxon and Mobil evidently calculated that it was safer to assert that landfilling and incineration were both capable of safely addressing plastic waste—even while knowing this was not the case—rather than risk being forced to slow their growing plastics businesses.

122. Throughout the 1970s, SPI and Mobil touted landfilling as a solution to the solid-waste crisis and plastics as environmentally beneficial. The President of SPI said plastics made ideal landfill material because “they don’t biodegrade,” they “just sit there.” SPI also reported that “non-degradable plastics contribute to the stability of landfill, in contrast with many other degradable materials which create problems such as settling, leaching, water pollution, and production of methane gas.” Mobil echoed this message in multiple publications. “[P]lastic doesn’t rot. It doesn’t produce methane gas that can cause fires and explosions or contaminants than can pollute underground waters. In fact, plastic makes a good fill material.” Mobil also advertised that “non-degradable polyethylene bags offer environmental advantages when disposed of in dumps and landfills.” Similarly, Mobil publicized that polystyrene foam in landfills

1 “compacts easily and will not contribute to either air or water pollution.”

2 123. Along with landfilling, the industry, including Exxon and Mobil, favored  
3 burning plastic waste, known as waste-to-energy incineration, as a means to address solid waste  
4 and the energy crisis,<sup>71</sup> even though this form of disposal involved clear environmental  
5 consequences, such as air pollution. According to a report produced for SPI in 1973, “The  
6 disposal of plastics via energy recovery and environmental incineration are two objectives that  
7 really should be one. Use of the energy generated during incineration of a plastic product is  
8 merely the ultimate in using petroleum in an effective manner for the public good.” SPI’s  
9 President further explained, “we’d rather see plastics . . . go into a municipal power incinerator  
10 which was a power plant.” In 1970, SPI published a paper stating that incineration is “the most  
11 feasible method of solid waste disposal now, and that it will be for the foreseeable future.”

12 124. According to Mobil, “[a]s we run out of space for landfills, municipal  
13 incineration will become an increasingly important means of waste disposal. The new incinerators  
14 could also serve as power plants, using trash as fuel to generate electricity. And petroleum-  
15 derived plastics will improve the quality of that fuel.”

16 125. To support incineration efforts, Mobil falsely reported that the incineration of  
17 plastic waste was not harmful. On July 21, 1987, Mobil published an advertisement in the *Los*  
18 *Angeles Times* titled, “*When it comes to solid waste, America’s policies are wanting,*” which  
19 claimed that “[i]ncineration may be the best hope [to address plastic waste], especially for some  
20 areas. While some environmentalists claim that burning trash may produce dioxins and other  
21 pollutants, and cause an ash disposal problem, modern incinerators practically eliminate  
22 emissions.” On February 23, 1988, Mobil published an advertisement in the *Sacramento Bee*  
23 titled, “Foam fast-food containers: The scapegoat, not the problem,” which falsely claimed that  
24 “[p]roper incineration of foam produces virtually nothing but harmless carbon dioxide and water  
25 vapor.” In a June 26, 1988 *San Francisco Examiner* article titled “*War of words over foam*  
26 *packaging,*” the author notes that “Mobil scientists said foam does not give off harmful chemicals  
27 when burned properly.” Mobil publicly claimed “polyethylene bags can be burned in existing

28 <sup>71</sup> Allen et al., Center for Climate Integrity, *supra*, at page 8.

1 municipal incinerators with no operating pollution problems . . . even at triple their normal load,  
2 plastics do not increase air pollution or cause operating problems in incinerators.” Mobil further  
3 publicized that polystyrene foam, “when incinerated, [ ] will not pollute the air” and that the  
4 incineration of both polystyrene and polyethylene bags produces mainly carbon dioxide and water  
5 vapor.

6 126. But notwithstanding these representations, the plastics industry was aware that  
7 incineration of plastics led to increased production of smoke, air pollution, and deterioration of  
8 metal parts of the incinerators themselves. In the industry’s internal discussions, Exxon and  
9 Mobil, through their agents, servants, alter-egos and/or trade groups, admitted that burning plastic  
10 would likely cause environmental harms. A report presented at an SPI 1972 annual meeting stated  
11 there were “no prospective customers for the steam” generated through plastic incineration.  
12 Despite heralding incineration as the solution to the plastic waste problem, the industry knew  
13 there were no markets for energy recovered through incineration and that it would cause air  
14 pollution.

15 **C. In Response to Public Pressure Seeking an End to Plastic Waste,**  
16 **ExxonMobil Misled the Public to Believe That Mechanical Recycling Was**  
**a Sustainable Solution.**

17 127. For decades, ExxonMobil aggressively touted mechanical recycling—  
18 recovering plastic waste by mechanical processes such as sorting, washing, drying, grinding,  
19 heating, re-granulating and compounding—to calm public and legislative pressure against the  
20 plastic waste and pollution crisis. ExxonMobil promoted mechanical recycling through its  
21 predecessors Exxon Chemical and Mobil Chemical, and through activities of its agents, servants,  
22 alter-egos and/or abettors. Meanwhile, internal discussions paint a vastly different picture—  
23 ExxonMobil always knew that recycling would never solve the plastic waste and pollution crisis  
24 and never intended to fund long-term recycling projects. Nonetheless, ExxonMobil sold the false  
25 promises of mechanical recycling to fight legislation, distract the public, and blame consumers for  
26 the plastic waste and pollution crisis.

27 ///

28 ///

1                   **1. Exxon and Mobil promoted mechanical recycling as the answer to**  
 2                   **plastic waste and pollution in the 1970s but knew mechanical**  
 3                   **recycling was not a feasible method to handle most plastic waste.**

4           128. ExxonMobil’s promotion of incineration and landfilling did not quell public  
 5 opposition to plastic waste, and legislatures and municipalities nationwide continued to consider  
 6 restrictions and bans. In response, ExxonMobil shifted its public relations strategy to promote  
 7 mechanical recycling as the solution to the plastic waste and pollution problem, and employed a  
 8 threefold strategy to quiet public concern and avoid regulation: first, widely disseminate  
 9 deceptive messaging about the supposed efficacy of recycling through advertisements and  
 10 lobbying; second, invest in short-term pilot projects to “prove” that recycling works and promise  
 11 that it will scale at some indefinite time in the future; and, finally, once public attention dwindles,  
 12 divest from recycling ventures and continue to produce more plastics, returning to business as  
 13 usual.

14           129. Exxon Mobil and the plastics industry knew, however, that recycling was not a  
 15 feasible solution to the plastics waste and pollution crisis. Referring to recycling at an SPI annual  
 16 meeting in 1972, one member admitted:

17           Gentlemen, before going any further, let me say that despite the extreme pressures on  
 18 the plastic industry to initiate recycling projects, I cannot in good faith recommend  
 19 *any* program today which I feel would be worthwhile without creating the risk of a  
 20 public relations backlash or getting way over our heads financially.

21           130. SPI also admitted that it did not have the techniques or end markets necessary to  
 22 recycle plastics from municipal refuse: “Thus, if we were forced to set up redemption centers and  
 23 take back all of our containers, we would have to turn them over to the Sanitation Department for  
 24 disposal. Currently, there is no economic value for used plastic containers.”

25           131. Similarly, an internal report that SPI and the Society of Plastics Engineers  
 26 sponsored in 1973 stated that “[w]hen plastics leave fabrication points, they are almost never  
 27 recovered. There is no recovery from obsolete products.” SPI further reported that, “there are no  
 28 effective market mechanisms for trade in contaminated, mixed plastics.” Industry periodicals  
 repeated this sentiment: “Recycling of wastes is currently believed to be the most acceptable form  
 of disposal; however, this route is known to be especially difficult for plastics” in part because

1 blended plastics result in degraded quality of plastic after recycling.

2 132. Recycling most plastics was technologically infeasible, as the plastics industry  
3 knew, and subsequent scientific research would confirm. “When recycled, some of the plastic can  
4 be remade into similar products; however, most is typically downcycled into a product of a lower  
5 quality and is unable to displace products made from virgin plastics [citation omitted].”<sup>72</sup> Even  
6 PET, the most easily-recycled type of plastic, quickly degrades through the recycling process.

7 133. Exxon and Mobil have known about the limitations of plastics recycling for  
8 decades. In 1986, the Vinyl Institute, a division of SPI, explained in an internal draft that  
9 “recycling cannot be considered a permanent solid waste solution, as it merely prolongs the time  
10 until an item is disposed of. At that point, recycled products also become MSW [municipal solid  
11 waste] components.”

12 134. At a Vinyl Institute meeting that same year, members discussed a recent study  
13 on the economics of recycling. “This study indicates that based on our economic system, on the  
14 cost of fuel and transportation, on the economic benefit of downstream markets, on the low cost  
15 of plastic feedstocks and the even lower cost of off grade-off spec plastic feedstocks, recycling is  
16 not and will never be commercially viable unless it is significantly subsidized by a government  
17 entity.”

18 135. Further, the industry knew that recycling post-consumer plastic was costly and  
19 difficult, and had little or no end market or economic value, making virgin plastic a cheaper  
20 option than recycled plastic. As Mobil stated in its “Primer”:

21 To get just a small amount of the material you want, you have to sift through tons of  
22 trash you don’t want. And when you get enough of it, you have to ship it to a plant  
23 where it can be scrubbed. Or purified. Or refined. Or upgraded. And then—maybe—  
24 you’ll have a raw material almost as good as the nice, clean stuff a supplier can  
25 deliver to your factory door for a lot less money. Finally, not all plastic submitted for  
26 recycling actually makes it through the recycling process—some is lost due to process  
27 inefficiencies and yield loss. The National Association for PET Container Resources’  
28 (NAPCOR) report from 2018 estimated that nearly a third (~30%) of the volume of  
plastic bottles collected for recycling were lost during the mechanical recycling  
process.

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<sup>72</sup> Moran et al., San Francisco Estuary Institute, A Synthesis of Microplastic Sources and Pathways to Urban Runoff (Oct. 2021) page 76.

136. Recycling plastics also introduces new toxins into the plastics themselves, which then become part of the new plastic products. Plastics processed for recycling absorb harmful chemicals they encounter in the waste stream, resulting in contaminated recycled products. In addition, the recycling process itself creates toxins when the plastics are heated.

137. Plastics specifically cannot be re-recycled into food-safe products, even if their original use was food-safe, as the mechanical recycling process introduces new toxins into the plastic.<sup>73</sup> European researchers have also discovered toxic flame retardants in plastic food wrap made with recycled plastics.<sup>74</sup> The recycled plastics are thus only acceptable for lower value uses and virgin plastic must be used for food-safe products.

138. Toxins created by the recycling process also create concerns for other products made with recycled plastics, including children's toys. Numerous studies have demonstrated high levels of toxic flame retardants,<sup>75</sup> dioxins,<sup>76</sup> and other harmful chemicals<sup>77</sup> in children's toys made with recycled plastics and/or recycled pellets that may be made into toys and other children's products.

**2. Opposition to plastic waste in the late 1980s and early 1990s posed a threat for Exxon's and Mobil's businesses, leading Exxon and Mobil to aggressively promote recycling, despite knowing that recycling was not a viable solution to the plastic waste and pollution problem.**

139. Despite ExxonMobil's knowledge that mechanical recycling would not be able to resolve the massive amount of plastic waste generated, Exxon and Mobil sold plastic recycling to the public as the key solution to the plastic waste and pollution crisis. These representations started as early as the 1970s. Mobil deceptively publicized that "waste can be disposed of by recycling. . . . Recycling sounds like an ideal solution. It would get rid of a lot of the trash and

<sup>73</sup> See Environment and Climate Change Canada, Assessing the State of Food Grade Recycled Resin in Canada & the United States (Oct. 2021).

<sup>74</sup> Puype et al., Evidence of Waste Electrical and Electronic Equipment (WEEE) Relevant Substances in Polymeric Food-Contact Articles Sold on the European Market (2015) 32 Food Additives & Contaminants 410.

<sup>75</sup> Guzzonato et al., Evidence of Bad Recycling Practices: BFRs in Children's Toys and Food-Contact Articles (2017) 19 Environmental Science: Processes & Impacts 956.

<sup>76</sup> Petrlik et al., Internat. Pollutants Elimination Network (IPEN), Plastic Waste Disposal Leads to Contamination of the Food Chain (June 2021).

<sup>77</sup> Brosché et al., Internat. Pollutants Elimination Network (IPEN), Widespread Chemical Contamination of Recycled Plastic Pellets Globally (Dec. 2021).

1 would cut down on the need for dumps, landfills, and incinerators. And it would conserve virgin  
2 raw materials.”

3 140. In a 1971 newspaper article, an environmental engineer at Mobil Chemical  
4 suggested publicly that recycling was the “probable answer,” despite the fact that at the time less  
5 than two percent of municipal waste was being recycled. Mobil deceived the public by equating  
6 post-industrial recycling feedstock (never-used scrap from the factory floor) with post-consumer  
7 recycling feedstock (which is more likely to be contaminated or lower quality after consumer  
8 use), telling the public that recycling “is technically possible” but citing only to post-industrial  
9 practices. In a similar vein, Mobil also publicly claimed that “[i]t is possible to recycle  
10 polyethylene bags,” even while it internally acknowledged that recycling post-consumer bags  
11 specifically was “uneconomical” and therefore would not actually occur.

12 141. In the late 1980s, the plastics industry was “under fire” due to the increased  
13 public sentiment against plastic, and worked to convince the public that recycling was working in  
14 order to allow the industry to continue making plastic products. But, in truth, for the industry  
15 “[t]here was never an enthusiastic belief that recycling was ultimately going to work in a  
16 significant way.”<sup>78</sup>

17 142. In furtherance of their campaign to convince the public that recycling was the  
18 answer to the plastics waste and pollution crisis, Exxon and Mobil, alongside other large  
19 petrochemical companies, formed the Council for Solid Waste Solutions (the Council) in 1988.<sup>79</sup>

20 143. After Exxon, Mobil, and others in the industry formed the Council, they pushed  
21 the plastics recycling message with increased coordination and seriousness. The Council spent  
22 millions of dollars on advertisements to herald recycling as the solution to plastic waste in hopes  
23 to change public perception. For example, the Council took out a 12-page advertisement in the  
24 July 17, 1989 edition of *Time* magazine exclaiming, “The URGENT NEED to RECYCLE.” But  
25 unlike most advertisements, this one did not sell a specific product. Rather, it read more like a  
26

27 <sup>78</sup> Sullivan, *Plastic Wars: Industry Spent Millions Selling Recycling—To Sell More*  
28 *Plastic*, NPR (Mar. 31, 2020) <<https://www.npr.org/2020/03/31/822597631/plastic-wars-three-takeaways-from-the-fight-over-the-future-of-plastics>> (as of July 29, 2024).

<sup>79</sup> Council for Solid Waste Solutions, *The Urgent Need to Recycle* (July 17, 1989) *Time*.

1 public service announcement issued by an official-sounding entity, the “Council for Solid Waste  
2 Solutions.” On June 29, 1989, Larry Thomas, President of SPI, sent a letter to SPI’s members  
3 explaining that the *Time* advertisement would “reach a total *Time* readership of 10 million . . . this  
4 is an important audience for us. It also is an appropriate venue. It was *Time*, after all, that named  
5 as its most recent ‘Man of the Year’ the planet earth wrapped in plastic”—referencing the cover  
6 of the January 2, 1989 edition of *Time*, which did, indeed, name the “Endangered Earth” “Planet  
7 of the Year” with a picture of the Earth wrapped in plastic.

8 144. The Council covered a myriad of topics in the *Time* advertisement, including  
9 the alleged environmental benefits of plastic packaging, along with: how Americans have come to  
10 depend on plastics; recycling as a smart solution for plastic waste; the Council’s and members’  
11 efforts to promote recycling and recycling technology; degradable plastics; the plastics industry’s  
12 intent to accelerate recycling; the uses for plastic “lumber;” and information about the Council  
13 itself.

14 145. A July 1989 article in *Plastics Newsbriefs*, an industry-focused publication of  
15 SPI, explained that because “most Americans believe plastics are not recyclable . . . [t]he *Time*  
16 piece is designed to show plastics as part of the solution, instead of the problem.”

17 146. Further, in a speech at a 1992 industry conference, SPI’s Partnership for Plastics  
18 Progress Vice President Donald Shea stated, “[i]f we are to survive the challenges of the so-called  
19 ‘green revolution,’ we must adapt to a new paradigm—a new way of doing business that will  
20 ensure the continued growth and expansion of the plastics industry. Shea then discussed the  
21 public’s growing concerns “about the impact of modern lifestyles on the environment” and how  
22 “[c]onsumers are rethinking the products they use and the manufacturing technologies that  
23 produce them.” The public’s negative perception of plastics worried SPI, as it was aware that  
24 “[p]ublic perception becomes legislative reality.” SPI decided to convince consumers that they  
25 could continue to purchase and use the industry’s plastic products without compromising their  
26 environmental concerns, by convincing the consumers that those plastics could be recycled. SPI  
27 did this despite knowing that the infrastructure for recycling did not exist and that, given the  
28 economic unprofitability of recycling post-consumer material, it would likely never exist on a

1 scale sufficient to handle the volume of plastics products the industry was producing.

2 147. The Council convinced Americans that recycling was the key to allow  
 3 Americans to continue consuming the plastics that—through the industry’s own efforts—had  
 4 become an essential component of everyday life. As SPI’s 1989 *Time* advertisement stated, “[t]he  
 5 growing movement to recycle plastic waste into new products holds a dual benefit for our  
 6 consumer society. First, plastics are less expensive than most other materials. Second, the  
 7 conversion of used plastics into new longer-life products reduces the volume of plastics in the  
 8 ever-growing municipal solid waste stream.”<sup>80</sup> But as Exxon, Mobil, and other members of SPI  
 9 knew, mechanical recycling was not happening, and would likely not happen at a sufficient rate to  
 10 meaningfully limit the amount of plastic that would be disposed of in other ways, particularly due  
 11 to the glut of new, cheaper virgin plastic still being produced.

12 148. Meanwhile, in 1989, Mobil misleadingly promised the public that it was  
 13 “venturing into recycling mainly out of a sense of environmental concern. ‘We are responsible for  
 14 that segment of the waste stream, so we’re going to see that it’s disposed of consistent with’ the  
 15 federal [EPA’s] recommendations.”

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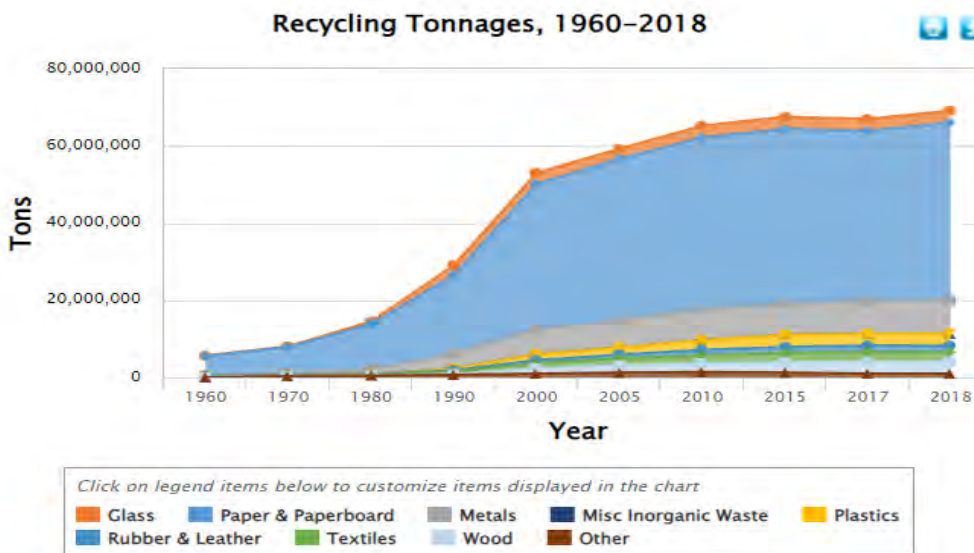
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28 <sup>80</sup> *Id.* at page 17.

149. At the time that Mobil made these statements, the national plastics recycling rate was between just one and two percent. See Figure F.

**Figure F: National Recycling and Composting Rates from 1960 to 2018<sup>81</sup>**



**Recycling and composting as a percentage of generation**

	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
<b>Paper and Paperboard</b>	17%	15%	21%	28%	43%	50%	63%	67%	66%	68%
<b>Glass</b>	2%	1%	5%	20%	23%	21%	27%	28%	25%	25%
<b>Plastics</b>	Neg.	Neg.	<1%	2%	6%	6%	8%	9%	9%	9%
<b>Yard Trimmings</b>	Neg.	Neg.	Neg.	12%	52%	62%	58%	61%	69%	63%
<b>Lead-acid Batteries</b>	Neg.	76%	70%	97%	93%	96%	99%	99%	99%	99%

"Neg." means less than 5,000 tons or 0.05 percent.

150. Exxon similarly recognized in a 1991 internal document that “[t]he industry needs to improve the public perception of plastics, which are widely regarded as a major contributor to the solid waste disposal problem.”

151. But Exxon, Mobil, and the industry knew that plastic recycling would only be minimally successful because, for most plastics, the costs of recycling or recovering used

<sup>81</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes, and Recycling* <<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#Trends1960-Today>> (as of July 29, 2024).

1 materials was higher than the cost of virgin equivalents.

2 152. The industry did not want recycling to succeed: “Virgin resin companies see  
3 recycling as ‘internal competition. They don’t want to see it succeed.’”<sup>82</sup> Exxon and Mobil had  
4 resources to invest in recycling but no financial incentive to do so. Their profits rely on the sale of  
5 virgin plastics, the products of fossil fuels.<sup>83</sup>

6 **a. Exxon and Mobil promised lofty plastic recycling targets that**  
7 **they knew were unachievable.**

8 153. Exxon and Mobil, through the Council for Solid Waste Solutions (Council),  
9 kicked off the 1990s by announcing a major initiative to promote plastics recycling. In or around  
10 early 1990, the Council announced a \$13.2 million, 12-month long program to fund research and  
11 promote plastics recycling. One highly publicized part of the program launched by the Council  
12 was the “Blueprint for Plastics Recycling,” a plan through which the Council would encourage  
13 recycling, including by encouraging communities to develop plastics recycling programs. The  
14 centerpiece of the Blueprint was the Council’s goal to increase the U.S. plastic recycling rate to  
15 25 percent by 1995, despite the fact that just over one percent of plastics was being recycled as of  
16 1990, when the program was announced.

17 154. The Council announced it would spend \$20 million per year to develop  
18 recycling capacity by providing information to communities about recycling, buying recycled  
19 plastic, and other recycling investments. However, the Council recognized that these investments  
20 were insufficient to meet the 25 percent recycling goal. In fact, the Council knew from the  
21 beginning that it would not meet the goal to increase the plastic recycling rate to 25 percent by  
22 1995, but “[t]wenty-five was felt to be the lowest rate that would be acceptable to the general  
23 public and the environmental community.” Despite some industry representatives believing 10  
24 percent to be a more reasonable goal, the Council made sure that the 25 percent stated goal was  
25 well-known.

26 155. Despite knowing its deficiencies, Exxon and Mobil continued to invest heavily

27 <sup>82</sup> Kirschner, *Recycling’s Rough Adolescence*, Chemical & Engineering (C&E) News (Nov.  
28 4, 1996) page 20.

<sup>83</sup> Freinkel, *supra*, at pages 192-193 (citing interview with Howard Rappaport).

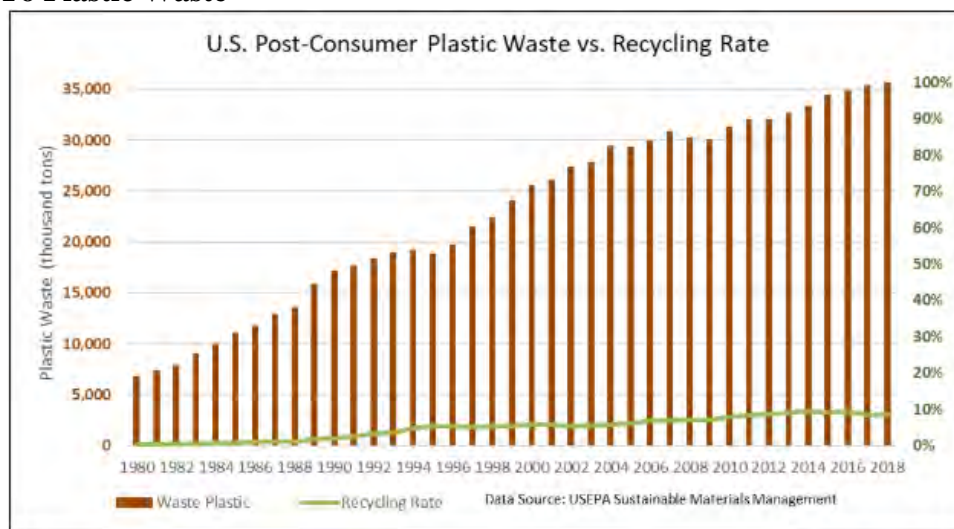
in marketing recycling to the public as the solution to plastic waste. A group of major resin makers that included Exxon and Mobil spent \$40 million to promote curbside recycling.

156. The millions of dollars spent promoting recycling as the solution to plastic waste dwarfed Exxon's and Mobil's actual investments in recycling infrastructure. While the Council—comprised of a small number of petrochemical companies including Exxon and Mobil—publicly announced a goal to increase the plastic recycling rate to 25 percent, neither Exxon nor Mobil invested significant funds to increase the feasibility of the alleged goal.

157. The plastics industry concurrently invested in virgin resin, creating an oversupply that drove the price of virgin plastic down. Inevitably, the low price of virgin plastic made recycled plastic even more uncompetitive. Between 1990 and 1996, for every pound of plastic packaging that was recycled, an average of four pounds of virgin plastic was produced.

158. In 1991, SPI and the Council for Solid Waste Solutions announced a goal to raise the post-consumer plastic bottle and containers recycling rate to 25 percent by 1995, but abandoned the goal, which was unmet, in 1995. Meanwhile, the plastic recycling rate in the U.S. has never surpassed nine percent (when massive amounts of plastic waste was exported to China), despite the exponential growth of plastic, meaning more and more plastic fails to be recycled year over year, as shown in Figure G, below.

**Figure G: Waste and the Plastics Industry's Alleged Dedication To Make Recycling A Solution To Plastic Waste<sup>84</sup>**



<sup>84</sup> Beyond Plastics and The Last Beach Cleanup, The Real Truth about the U.S. Plastics Recycling Rate (May 2022) page 4.

1           159.       The plastics industry, including Exxon and Mobil, recognized, however, that the  
2 public was demanding action on the solid waste crisis. In 1991, Mobil published advertisements  
3 in national newspapers claiming that the company had “spent hundreds of millions of dollars on  
4 environmental efforts” in the last year, including plastic recycling. Mobil informed the public that  
5 it was working with supermarket chains to collect plastic shopping bags, which would be recycled  
6 in Mobil’s plants. These efforts, Mobil explained, “add[] to the momentum the plastics industry  
7 has attained as a responsible recycler.”

8           160.       At the same time, a 1991 report by the Congressional Research Service noted  
9 that serious obstacles to mechanical recycling existed at the time in the areas of resin  
10 identification, collection, and sorting, and that according to interviews with industry executives  
11 that it made “little sense” to recycle plastics. But the industry nonetheless carried forward, as “the  
12 public is generally aware, partly thanks to industry information efforts, that plastics can be  
13 economically recycled as materials.” SPI internally explained its contradictory practice was  
14 intended to appease the public and combat anti-plastic sentiment:

15           The public fully embraces only one of the key elements of the integrated waste  
16 management package: recycling. Public opinion research conducted for the Council  
17 repeatedly has shown that Americans will not support building additional waste-to-  
18 energy or landfill capacity until a major recycling effort has been made. . . . **We have  
19 got to meet the public on its own terms if we are to secure the acceptance of our  
products.** In the short term, that means pursuing recycling to the best of our  
abilities—without promising more than can be economically or environmentally  
delivered.

20 Exxon, Mobil, and its industry trade groups knew the public would only accept plastic if they  
21 thought it was sustainable. As a result, they promoted recycling as the mechanism to make plastic  
22 appear sustainable. SPI stated internally, “we must adapt to a new paradigm—a new way of doing  
23 business that will ensure the continued growth and expansion of the plastics industry.” The new  
24 way of doing business included fooling the public into believing that recycling plastic would  
25 solve the plastic waste and pollution problem while increasing the amount of virgin plastic sold to  
26 the public.

27       ///

28       ///

**b. Exxon and Mobil sought buy-in for their recycling goals by attempting to convince consumers that they were to blame for the plastics crisis.**

161. A crucial part of Mobil's and Exxon's strategy to promote plastic recycling was convincing consumers that they were responsible for the proliferation of plastic waste through their own personal habits, rather than through Mobil's and Exxon's efforts to produce an increasing number of plastic products designed for single-use. This strategy shifted attention from Mobil's and Exxon's creation of the plastic to consumers' behavior. Keep America Beautiful, a non-profit organization created by the packaging industry, campaigned against littering and blamed individuals, the "litter bugs," for trash that entered the environment. Keep America Beautiful's focus on littering diverted the public's attention toward individual misbehavior, while at the same time allowing industry to continue producing single-use packaging that, even when properly entered into the waste stream, contributed significantly to plastic pollution.

162. Mobil published advertisements reminding consumers of their role. One in the *Los Angeles Times* stated: "[T]here are no heroes or villains. Every household, like every store or factory, produces its share of refuse. All should shoulder a fair share of the cost of removal."

163. In another, published in the *Sacramento Bee* in 1988 entitled "Foam fast-food containers: The scapegoat, not the problem," Mobil said: "[T]he [plastic waste] problem has to be attacked logically and scientifically, without a helter-skelter rush to anoint villains. For the fact is, there are no villains, and we're all 'guilty.' Every household, every business, every office—indeed, every American—contributes to the refuse stream every day. To zero in on the fast-food business, or the plastics industry is to engage in scapegoating, not problem-solving."

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164. While Exxon and Mobil waged an ongoing campaign to convince the public that plastics recycling would solve the plastic waste and pollution problem, they also continued shifting the blame for dismal plastic recycling rates onto the public:

Recycling projects initiated by the plastics industry have been announced in many parts of the country. And the opportunities for more plastics recycling ventures are nearly limitless. All that remains to make widespread recycling of plastics a reality is public sector support: more communities and cities must develop programs for separation and collection of recyclable materials. Only then will we be able to ensure a reduction of the growing waste stream.<sup>85</sup>

165. In 1992, the American Plastics Council (APC), of which Exxon and Mobil were members, pledged to educate consumers on “their role in meeting environmental challenges.”

166. Exxon, Mobil, and others in the industry recognized that the promotion of recycling was key to allowing consumers to feel comfortable continuing to purchase and dispose of their plastic products—the other side of the coin to blaming consumers for plastic waste. Recycling was a “guilt eraser” that allowed the public to consume plastic products and believe that through recycling, they had the power to ensure that plastic materials would not become pollution and would have a new life as useful products.<sup>86</sup>

**c. Exxon and Mobil, through the Society for the Plastics Industry, created and promoted the chasing arrow symbol despite knowing that it was deceiving the public into thinking that all plastics are recyclable.**

167. The “chasing arrows” symbol, a logo showing three arrows each folded in the middle and arranged in a triangle was invented in 1970 by a student who won a contest held by a box manufacturer to promote recycling of paper.<sup>87</sup> The chasing arrows symbol is now strongly associated with recycling, and consumers usually assume that the symbol identifies items that can be recycled.<sup>88</sup>

168. In or around 1988, in an attempt to stave off regulation, SPI modified and

<sup>85</sup> Council for Solid Waste Solutions, *supra*, at page 22.

<sup>86</sup> Freinkel, *supra*, at page 162 (citing Roger Bernstein of the American Chemistry Council).

<sup>87</sup> Che, *His Recycling Symbol Is Everywhere. The E.P.A. Says It Shouldn't Be.*, N.Y. Times (Aug. 3, 2023) <<https://www.nytimes.com/2023/08/07/climate/chasing-arrows-recycling-symbol-epa.html>> (as of July 29, 2024).

<sup>88</sup> *Ibid.*

1 adopted the chasing arrow symbol for plastic containers, including a number in the middle of the  
2 three arrows, ranging from 1 to 7, that would correspond to the type of resin the item was made  
3 from. This placed responsibility for plastic waste on individual consumers, who would need to  
4 know the capabilities of their local recycling facility to recycle each resin number at all times and  
5 in all locations, as facilities vary in which resins they accept for recycling. Indeed, there were and  
6 still are no western U.S. recycling facilities that can process resin numbers 3 to 7. Nevertheless,  
7 SPI's Council on Plastics and Packaging in the Environment (COPPE) assured lawmakers that the  
8 codes would "help guide recyclers and promote the practice" by showing the type of plastic that  
9 composed an item. Since "[a]lmost all recycling markets are designed to handle one kind of  
10 plastic at a time," the industry needed to demarcate the type of plastic on their products in order to  
11 group specific types together for recycling. While demarcating the type of plastic on their  
12 products makes sense, the use of the chasing arrows, universally understood as the recycling  
13 symbol, was unnecessary and misleading.

14 169. Indeed, in practice, the symbol led consumers to believe that all labeled plastic  
15 items were recyclable, due to the chasing arrows symbol. In truth, however, most plastic resins  
16 were not able to be recycled because there were no recycling facilities that were capable of  
17 recycling most resin numbers.

18 170. Despite hijacking and promoting the chasing arrows symbol as a purported  
19 boost to plastic recycling, the plastics industry knew that the resin identification codes would not  
20 improve plastic recycling. Instead, the coding was intended to hide the limits of recycling, delay  
21 regulation, and pass responsibility for plastic waste onto consumers. According to the Vinyl  
22 Institute in 1986, "efforts to simplify source separation by labeling containers as to their material  
23 makeup—a solution growing in popularity with regulators—are of limited practicality."

24 171. According to Coy Smith, former National Recycling Coalition<sup>89</sup> board member,  
25 SPI offered the resin codes to state and local governments as a purported way to address the  
26 government's concerns about solid waste while allowing their constituents continued access to

27 \_\_\_\_\_  
28 <sup>89</sup> National Recycling Coalition is a non-profit advocacy organization of recyclers, nonprofits, and other groups. See National Recycling Coalition, What We Do, 2023 (2023).

1 disposable products. The industry “convinced [] states to pass laws—and they did this very  
 2 quietly—they passed laws that required that symbol with the number on it be put on plastic  
 3 containers sold in that state.... [F]or most states they did it in, recyclers didn’t even know it  
 4 happened.”<sup>90</sup>

5 172. In states like Iowa, Minnesota, and Ohio, the industry in quick succession  
 6 managed to convince legislators to mandate plastic container coding and other measures meant to  
 7 promote plastic recycling, in exchange for abandoning bills prohibiting some or all disposable  
 8 plastics. By the mid-1990s, SPI’s resin code symbol was legally mandated in 39 states. Even the  
 9 California chasing arrows bill, Assembly Bill 3299, introduced on February 12, 1988, by  
 10 Assemblymember Killea, was originally written to “require plastic containers and packaging to be  
 11 manufactured of recyclable or biodegradable plastic.” That bill language was removed and the  
 12 bill was amended in the State Assembly on March 22, 1988, to require only a molded label on  
 13 plastic products indicating the plastic resin code.

14 173. As intended, the plastic resin identification codes confused consumers, who  
 15 believed that any item containing the chasing arrows symbol was recyclable. Two surveys in  
 16 different states showed that between 53 and 74 percent of consumers believed the presence of the  
 17 symbol on a product meant it could be recycled where they live. In the early to mid-1990s, a  
 18 coalition that included plastics recyclers urged SPI to change the chasing arrows symbol to avoid  
 19 consumer confusion and make it easier for plastic recyclers to process incoming materials. SPI  
 20 refused to accept the suggestions of the coalition, choosing instead to continue using the chasing  
 21 arrows symbol that wrongly convinced consumers that plastics separated for recycling would  
 22 actually be recycled. This consumer confusion, which placed the blame of plastic waste on  
 23 consumers themselves and thus paralyzed regulatory solutions, was the point.

24 **3. ExxonMobil and the plastics industry successfully fought against**  
 25 **plastics restrictions in California and elsewhere with the promise that**  
 26 **recycling would make plastics more sustainable.**

27 174. Mobil aggressively responded to regulatory and legislative solutions to reduce  
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<sup>90</sup> Sullivan, *Plastic Wars* (film transcript) (2020) PBS Frontline  
 <<https://www.pbs.org/wgbh/frontline/documentary/plastic-wars/transcript/>> (as of July 29, 2024).

1 the use of disposable plastic products in order to continue growing its plastics production  
2 business. Beginning in the early 1970s, SPI aggressively fought a tax on plastic bottles in New  
3 York and won.

4 175. SPI then created a separately-funded Public Affairs Council, the function of  
5 which was limited in scope to areas of packaging and solid waste. The Public Affairs Council  
6 monitored and reported to its members on state bills related to packaging, solid waste, littering,  
7 and other areas of environmental concern.

8 176. Mobil and the plastics industry mobilized against anti-plastic initiatives “in  
9 every state and municipality that offered a serious threat to the industry’s sales and profits.”  
10 Mobil also mobilized its efforts at the federal level. In 1974, SPI boasted that it persuaded the  
11 U.S. Food and Drug Administration to bypass a statement on the environmental impact of  
12 refillable or disposable plastic bottles, and instead only compared plastic disposables to other  
13 disposable materials. The plastics industry aimed to quash challenges to the growth of plastic use  
14 and the profits derived from plastics at every level.

15 177. As part of its strategy to continue promoting the false promise of recycling, the  
16 Council also successfully fought plastics restrictions and bans in California. On April 26, 1989,  
17 the California State Lands Commission banned the use of polystyrene foam food containers at  
18 state-led concession stands and marinas. The Council for Solid Waste Solutions “coordinat[ed] a  
19 meeting between industry representatives and the commission to attempt to reverse the  
20 prohibition.” Indeed, a June 26, 1988 *San Francisco Examiner* article titled, “*War of words over*  
21 *foam packaging*,” noted that “Mobil [] spen[t] tens of thousands of dollars in an elaborate public  
22 relations campaign to slow the spread of laws that make it illegal to use foam containers.”

23 178. In April and May of 1989, several California cities considered bans on  
24 polystyrene packaging. On April 24, 1989, the City of Palo Alto considered ordinances that  
25 would (1) ban disposable polystyrene and rigid plastic food service items, (2) require retail stores  
26 to offer either paper bags only or a choice between paper and plastic bags, and (3) require that  
27 city staff purchase alternatives to polystyrene and disposable rigid plastic food service items. In  
28 May 1989, the City of San Ramon considered an ordinance to ban the use of polystyrene foam

1 food packaging by restaurants and its city administrative offices. The Council for Solid Waste  
2 Solutions opposed these ordinances.

3 179. In May 1989, the County of Santa Cruz considered banning the use of  
4 polystyrene foam food packaging. According to the Council, “[i]ndustry representatives have  
5 presented the assistant county counsel with information on consequences of such a ban.” The  
6 Council successfully opposed passage of the ban. The County of Santa Cruz would go without a  
7 polystyrene ban for almost two decades—until 2008, when it passed an ordinance banning  
8 polystyrene foam packaging in food service.

9 180. According to the Council for Solid Waste Solutions, “[t]he Sacramento County  
10 Board of Supervisors on April 18 [1989] adopted a policy encouraging the public and private use  
11 of ‘recyclable, reusable, or biodegradable’ products made without [chlorofluorocarbons]. In  
12 response to testimony and meetings with [the Council for Solid Waste Solutions] and industry  
13 representatives, the board amended their original proposal that would have called for a decrease  
14 in the use of polystyrene foam products and increased use of biodegradable products.” Similarly,  
15 “[t]he City of Huntington Beach had directed its citizens’ advisory committee to investigate the  
16 feasibility of a ban on polystyrene cups made with [chlorofluorocarbons]. Following a meeting  
17 with [the Council for Solid Waste Solutions] on May 11, the committee decided to recommend  
18 against the ban.”

19 181. In May 1989, Los Angeles City Councilmember Ruth Galanter introduced a  
20 polystyrene foam packaging ban. The Council for Solid Waste Solutions made plans to address  
21 the councilmember about the proposal. The City of Los Angeles would go without a polystyrene  
22 ban for over three decades; it finally passed an ordinance banning polystyrene foam products in  
23 2022.

24 **4. Mobil deceptively advertised the expansion of recycling initiatives**  
25 **but quietly abandoned them a few years later.**

26 182. As described below, Mobil claimed that its plans to recycle plastic bags, its  
27 participation in the National Polystyrene Recycling Company, along with its work through the  
28 Council for Solid Waste Solutions, showed that the plastics industry was responsibly recycling.

1 Through these and other efforts, Mobil conveyed that plastic recycling would solve the problem  
 2 of plastic waste and pollution. These efforts, however, paled in comparison to the huge numbers  
 3 of virgin plastics the industry was producing. Moreover, Mobil could not sustain these recycling  
 4 projects for more than a few years. As Exxon Chemical Vice President Irwin Levowitz explained  
 5 in a 1994 meeting with the American Plastics Council (APC), “[w]e are committed to the  
 6 activities, but not committed to the results.”<sup>91</sup>

7 **a. Mobil’s highly publicized efforts to recycle polystyrene failed.**

8 183. In November 1988, Mobil announced that along with plastic manufacturer  
 9 Genpak Corporation, it would open the nation’s first polystyrene recycling plant in Leominster,  
 10 Massachusetts, which would start by recycling used foam dishes from school, industrial, and  
 11 institutional cafeterias. The plans were for the Leominster plant to recycle three million pounds of  
 12 used polystyrene per year.

13 184. In or around June 1989, Mobil and six other producers of polystyrene  
 14 announced that they were joining forces to form the “National Polystyrene Recycling Company”  
 15 (National Polystyrene) which would establish recycling centers for expanded polystyrene (plastic  
 16 foam), with five such centers opening by the end of 1990. Each of the seven major producers paid  
 17 two million dollars to start the company. National Polystyrene planned to open recycling centers  
 18 near Los Angeles, San Francisco, Chicago, and Philadelphia, in addition to existing facilities in  
 19 Corona, California and Leominster, Massachusetts. Although the involved companies invested  
 20 \$85 million between 1989 and 1997 for recycling facility operations, the National Polystyrene  
 21 project inevitably failed because the recycled products could not profitably compete with virgin  
 22 resin.

23 185. National Polystyrene promised that “1990 is going to be a pivotal year for  
 24 polystyrene recycling’ [ . . . ]. It will be the year that polystyrene recycling gains momentum.” In  
 25 1990, Mobil published advertisements in national newspapers telling consumers that the National  
 26 Polystyrene Recycling Company’s goal was to recycle at least 25 percent of all food service and

27 \_\_\_\_\_  
 28 <sup>91</sup> Allen et al., Center for Climate Integrity, The Fraud of Plastic Recycling, *supra*, at page 21.

1 packaging polystyrene by 1995, or 250 million pounds per year. In or around August 1990,  
2 National Polystyrene announced the opening of a second recycling facility, this time in Corona,  
3 California, to be operated by TALCO Recycling Inc. beginning in October 1990.

4 186. According to National Polystyrene, products made out of the used polystyrene  
5 would be turned into items with long service lives, keeping the polystyrene out of the waste  
6 stream long-term. National Polystyrene also falsely claimed that “most products made from  
7 recycled polystyrene can be recycled again and again.”

8 187. Meanwhile, on May 4, 1989, Mobil announced that it would expand a new  
9 polystyrene production line at its plant in Joliet, Illinois, expected to be completed in 1991. The  
10 expansion would increase the Joliet plant’s polystyrene production by 485 million pounds of resin  
11 annually and raise Mobil’s total production of polystyrene to 625 million pounds per year.

12 188. But in November 1990, these plans were foiled when a very large consumer of  
13 polystyrene, McDonald’s, announced that it was switching from polystyrene to paper packaging  
14 for its restaurants because its attempts to have its customers separate polystyrene had been largely  
15 unsuccessful. This meant that the materials arriving at the recycling plant were contaminated and  
16 produced low-quality recycled plastic.

17 189. In the wake of McDonald’s ending its use of polystyrene, National Polystyrene  
18 announced that it would instead focus on partnerships with schools and industrial cafeterias, as  
19 “students are more dutiful in separating foam trays from other wastes.” In East Rockaway, New  
20 York and Lexington, Massachusetts, National Polystyrene led students who wished to stop using  
21 polystyrene trays in their lunchrooms to believe that allowing the plastics industry to assist them  
22 in recycling the trays was more beneficial than switching to a different material. Los Angeles  
23 Unified School District, as well as other school districts in California, contracted to provide their  
24 used polystyrene trays to National Polystyrene and other polystyrene recyclers.

25 190. By 1994, just five years after the program started, National Polystyrene had cut  
26 its staffing by 25 percent and closed its Hayward, California plant, as it was forced to cut costs in  
27 an attempt to compete with virgin resin. National Polystyrene had sold its first plant in  
28 Leominster, Massachusetts and that plant had subsequently closed as well. In 1997, National

1 Polystyrene also closed its plant in Bridgeport, New Jersey, leaving only its plants in Chicago,  
 2 Illinois and Corona, California. National Polystyrene admitted that the company was still not  
 3 profitable and had only made money in 1995 and part of 1996. The President of National  
 4 Polystyrene blamed consumers for recycling's inherent limitations, claiming "[t]he public does  
 5 not want to buy recycled products."

6 191. In 1997, a 14-year-old student in North Carolina investigated her school's  
 7 polystyrene tray recycling program for a class project and discovered that the trays were being  
 8 dumped into a landfill rather than recycled. The National Polystyrene chairman confirmed that  
 9 only two percent of polystyrene was being recycled at the time, despite the industry's promise to  
 10 recycle 25 percent by 1995, and again blamed consumers for "not participating as expected." In  
 11 1999, National Polystyrene was sold.

12 **b. Exxon quickly abandoned its polypropylene recycling center.**

13 192. Exxon engaged in similar short-term projects in an attempt to convince the  
 14 public that plastic recycling would solve the problem of plastic waste and pollution. In 1991,  
 15 Exxon Chemical Company began construction of a plastics recycling facility in Summerville,  
 16 South Carolina, with stated plans to recover 20 million pounds per year of post-industrial scrap.  
 17 In 1994, Exxon sold its South Carolina polypropylene recycling center.<sup>92</sup> Exxon explained that it  
 18 had built the recycling center to demonstrate a method for recycling polypropylene resin but had  
 19 sought a buyer "that would continue to operate this facility and integrate it as part of its core  
 20 business."

21 193. This recycling "demonstration" bought Exxon cover to continue investing in  
 22 ramping up plastic production. Indeed, less than a year later after it sold its recycling facility,  
 23 Exxon Chemical announced that it would build a new polypropylene production line at its  
 24 Baytown, Texas plant. The new line would raise production by 240,000 tonnes per year to bring  
 25 Baytown's yearly capacity to 720,000 tonnes. Exxon also announced that it would produce a new

26 \_\_\_\_\_  
 27 <sup>92</sup> Exxon sold the recycling center to Washington Penn Plastics, which in 2001 formed a  
 28 joint venture with another local polypropylene recycling plant in an attempt to make operations  
 profitable, as both recycling center owners had found their recycling endeavors unprofitable.  
 (That facility closed in 2008.)

1 low density polyethylene (called “EXCEED”).

2 **c. Mobil misrepresents its ability to recycle polyethylene shopping**  
3 **bags.**

4 194. In 1990, Mobil announced that it would begin a program to recycle  
5 polyethylene grocery sacks at its factories in Jacksonville, Illinois; Covington, Georgia; Macedon,  
6 New York; and Temple, Texas. Mobil announced it would work with any willing supermarkets to  
7 collect plastic bags. Kroger and A&P would participate, as well as Safeway in California, Hawaii,  
8 and Nevada. Mobil assured consumers that it was “good for the environment” that so many of  
9 them used plastic bags to carry their groceries because the bags would be “recycled into new,  
10 useful plastic products.” Customers could bring in shopping bags to recycle, as well as other types  
11 of plastic bags.

12 195. In 1992, Mobil announced that it would be able to wash polyethylene at its  
13 Jacksonville, Illinois plant prior to recycling, streamlining the recycling process. The following  
14 year, Mobil announced that the film it recycled at its Jacksonville, Illinois facility would be used  
15 in its new stretch film, Marketwrap, containing at least 20 percent post-consumer material, as well  
16 as its Tucker Housewares line, consumer and industrial waste bags, and wood-polymer composite  
17 building material.

18 196. Customers and grocery stores concerned about the environmental impact of  
19 plastic shopping bags eagerly took to the new program. Customers of the Lucky grocery store  
20 chain in Southern California returned 9.7 million plastic bags during approximately the first year  
21 and a half that Lucky started accepting them.

22 197. As the popularity of the bag return program grew, it became clear that the bags  
23 were not being converted into new products as customers were promised. In 1992, Bob  
24 Leaversuch, an editor of *Modern Plastics*, explained that the bag return stream, predictably, is a  
25 mix of linear-low-density PE and high molecular weight-HDPE, materials having markedly  
26 different densities, and flow and physical properties. And the mix of colors and inks used in  
27 grocery sacks also yields a reclaimed pellet that is gray-green, and whose reuse potential is  
28 therefore limited. Nor can one ignore the potential contaminants, ranging from paper receipts to

1 pennies left in the bags.

2 198. As one processor-converter told Mr. Leaversuch, “Our industry is being driven  
3 to put recycle-content in our bags, but make no mistake about it, this is difficult and it drives up  
4 our cost.” It cost 25 cents per pound to process the used bag stream, while equivalent virgin resin  
5 can be purchased for 22 cents per pound.

6 199. Seeing the writing on the wall, in 1995, Mobil sold its entire Plastics Division,  
7 which included its facilities for recycling polyethylene grocery sacks in Jacksonville, Covington,  
8 Macedon, and Temple.

9 **d. By the mid-1990s, Exxon, Mobil and the plastics industry**  
10 **stopped funding recycling efforts and ramped up production of**  
11 **virgin plastics.**

12 200. By the mid-1990s, the plastics industry had succeeded in convincing the public  
13 that it could sustainably use and dispose of plastic products marketed by Mobil and others  
14 because the plastics would be recycled. The industry’s focus on selling the recyclability of  
15 plastics, and thus investments in recycling itself, waned. The American Plastics Council’s (APC)  
16 senior director of government affairs and state legislation explained: “There’s a shift in the  
17 political climate .... There’s a recognition that the plastics industry has made strides. There is a  
18 feeling we are more in alignment, that we’re not singled out as the symbol of a throwaway  
19 society, a society using too much.” As one industry consultant observed: “The environmental  
20 pressure is off.”

21 201. Meanwhile, the plastics industry had accurately recognized that recycling was  
22 not economically viable. The price of recycled resins could not compete with low-cost virgin  
23 resins, and recycled resins were of lower quality. Higher-priced products made of lower-quality  
24 recycled resins had difficulty competing with cheaper virgin plastic products, despite customers’  
25 desires for recycled products.

26 202. In the late 1990s, Exxon was producing 1.6 billion pounds of virgin  
27 polypropylene at its Baytown, Texas chemical plant. Exxon also produced polyethylene and  
28 worked to develop new uses that would necessitate its additional production, such as single-  
serving milk bottles that consumers could drink on the go. A business research firm conducting a

1 1995 study of plastic recycling concluded that:

2 Recycled resin prices must decrease in order to make them more competitive with  
3 virgin resins. Some of the price differentials will be enhanced when economies of  
4 scale are reached. Nevertheless, recycled resins are more difficult to process and of  
5 generally lower quality than virgin resins because of the presence of contaminants  
and an array of varying color and other additives.... Enhanced supercleaning and  
other processes produce high quality resins comparable to virgin materials but at a  
higher cost.

6 The firm predicted that a mere 3.4 percent of plastics would be recycled by 1998, a far cry from  
7 the 25 percent the industry had promised by 1995.

8 203. In 1996, Rutgers' Center for Plastics Recycling Research, which opened in  
9 response to New Jersey's attempts to ban non-recyclable materials, closed due to "dwindling  
10 contributions from the plastics industry, a perceived decline in the necessity and practicality of  
11 plastics recycling, and a change in research emphasis by the university and state agencies." Two  
12 major recycling centers also closed at or around the same time: Quantum Chemical's plant in  
13 Heath, Ohio, and Union Carbide Corporation's plant in Piscataway, New Jersey. After plastics  
14 industry lobbyists succeeded in preventing the California legislature from passing a robust  
15 plastics recycling law, and after the plastics industry successfully convinced the public that  
16 voluntary recycling was the solution to plastic waste and pollution, the industry shifted its focus  
17 away from recycling.

18 204. When the industry urged the public to embrace plastics recycling and to "take  
19 responsibility" for consumers' own use of plastic products, the public willingly did so. But the  
20 recycling industry never committed to actually recycle these plastic products.

21 205. In communities near San Diego, local governments that had eagerly set up  
22 curbside recycling programs found that no one wanted most of the plastics they collected from  
23 residents, except for soda bottles, jugs, and similar items. For recyclers, it was not economically  
24 feasible to take other plastics, and those communities considered dumping the purportedly  
25 recyclable trash they had collected.

26 206. In the Twin Cities in Minnesota—two of the first cities to consider plastic bans,  
27 which instead accepted the plastics industry's offer of assistance in developing a recycling  
28 program—ostensibly recyclable plastic products were "piling up" due to a lack of recycler

1 demand.

2 207. For the recycling industry, it was impossible to make plastics recycling  
3 profitable. Anticipating that plastic recycling would be mandated, an owner of a Norwalk,  
4 Connecticut solid waste consulting company stated, “It’s hard to make money on it, but we’ve got  
5 to find ways to minimize the losses.” Indeed, an employee of Replatec, a plastic waste company,  
6 also stated that “it’s not clear that the market for even ‘pure’ recycled resins will be strong enough  
7 to support the cost of sorting and collecting any time soon—even if the industry realizes its goals  
8 of developing new uses for recycled material.” Likewise, governmental entities were also facing  
9 budget crises that affected plastics recycling: “Washington, D.C. halted municipal recycling  
10 several times in the mid-1990s, as did New York City for two years starting in 2001. In both  
11 cases, local officials argued that they had to suspend recycling to save money.”<sup>93</sup>

12 208. As the Council for Solid Waste Solutions’ Ronald Lisemer said, “[t]he industry  
13 attitude was, ‘We’ll set this up and get it going, but if the public wants it, they are going to have  
14 to pay for it.’”<sup>94</sup>

15 209. At an APC meeting in 1994, Exxon staff advised others to avoid being too open  
16 about discussing how far from target the industry was from meeting its recycling goals, as the  
17 issue was “HIGHLY SENSITIVE POLITICALLY.”<sup>95</sup>

18 210. APC ultimately failed to meet the goals set by its parent organization, SPI, to  
19 recycle 25 percent of plastics by 1995. APC denied that it had failed, stating vaguely that “[t]he  
20 idea of rates, dates, mandates . . . numerical goals, is all very artificial.” APC retreated from SPI’s  
21 goal, claiming, “the 25 percent target is not as important as it once was” because progress had  
22 been made to remove obstacles to recycling. The former director of governmental affairs for Dow  
23 Chemical Co., who was also involved with APC, explained that “[SPI was] caught in a rate and  
24 date frenzy. . . . There was pressure to set rates and dates because the fear was that if they didn’t,  
25 the government would set worse ones.”

26 <sup>93</sup> Rogers, *Gone Tomorrow: The Hidden Life of Garbage*, *supra*, at page 180.

27 <sup>94</sup> Sullivan, *Plastic Wars* (film transcript), *supra*.

28 <sup>95</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at page 14 (citing Bailey Condrey, *ART Meeting—Houston 1/26/94*, in Notes 1 (1994)).

211. ExxonMobil’s campaign of deception—or, “propaganda efforts,” as one 1988 article coined it—had succeeded. With the public continually falling victim to ExxonMobil’s misinformation, the demand for plastic has steadily increased for decades. Consequently, “U.S. plastics production grew from 3 billion pounds in 1958 to more than 61 billion pounds in 1990, with an average annual growth rate of 10.3 percent.”

212. The result foreseeably oversaturated and overwhelmed an ill-equipped waste management system. Over ten years later, in 2000, the plastics recycling rate sat at only six percent and only increased three percentage points, to nine percent, by 2018.<sup>96</sup> According to plastic waste export data, the ostensible increase to nine percent was largely due to millions of pounds of plastic waste being exported each year to China and developing countries, supposedly for recycling but often for incineration or landfilling.<sup>97</sup> Today, the plastic waste exports have declined and the U.S. plastics recycling rate has declined to a dismal five percent.<sup>98</sup>

**D. In the 2000s, ExxonMobil Again Promoted Recycling to Distract the Public from Its Contribution to Plastic Pollution.**

**1. In the 2000s, public knowledge of marine plastic pollution becomes widespread.**

213. By the late 1990s and early 2000s, public attention temporarily shifted away from the issues of plastic production and waste management, as ExxonMobil had successfully convinced many members of the public that their plastic waste would be recycled.

214. But the full extent of plastic pollution would not stay hidden for long. In 1997, a sailor and researcher named Charles Moore stumbled upon what later became known as the Great Pacific Garbage Patch—an enormous area between California and Hawaii where pollution had converged and formed a giant plastic soup. The plastic ranged in size from tiny particles to much larger items like bottles and traffic cones.

<sup>96</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes, and Recycling*, *supra*.

<sup>97</sup> Beyond Plastics and The Last Beach Cleanup, The Real Truth about the U.S. Plastics Recycling Rate, *supra*, at page 2.

<sup>98</sup> Nat. Renewable Energy Laboratory, *NREL Calculates Lost Value of Landfilled Plastic in the U.S.* (April 28, 2022) <<https://www.nrel.gov/news/press/2022/nrel-calculates-lost-value-of-landfilled-plastic-in-us.html>> (as of July 28, 2024); see also Beyond Plastics and The Last Beach Cleanup, *supra*.

215. Moore's discovery inspired him to dedicate his career to studying marine pollution. Other researchers followed suit and the issue received attention from mainstream media. By the mid-2000s, the Garbage Patch had received broad media coverage and scientists had found a total of five similar gyres where trash was concentrated.

216. Scientists studying the impacts of plastic pollution determined that nearly 90 percent of the floating mass of trash was plastic. Scientists also observed that albatross chicks born near the floating trash consumed plastic items that they mistook for the sea life they normally consume and that many of the chicks passed away. Plastic also caused the death of an estimated one million other seabirds and a hundred thousand other sea mammals and turtles every year.

217. Similar to the late 1980s and early 1990s, when ExxonMobil faced public backlash over the volume of plastic waste that its business had created, ExxonMobil had a new public relations crisis. By the mid-2000s, not only was the public aware that plastics produced an enormous amount of waste, but the public now knew that vast amounts of plastic were flowing into the ocean and causing untold damage to the marine environment and wildlife.

218. Patty Long, interim chief executive of the Plastics Industry Association, reflected at an industry event in 2019 that "it's been pretty uncomfortable ... as we have watched images of plastic strewn over beaches and pictures of sea animals with ingested plastic."<sup>99</sup>

219. In 2008, the California Ocean Protection Council, a state agency, issued a strategy to reduce marine litter, implementing its 2007 resolution addressing the same concerns.<sup>100</sup> The strategy included reducing single-use plastic packaging, preventing and controlling litter, removing litter, and coordination with other Pacific jurisdictions.<sup>101</sup>

220. In 2004, an oceanographer named Richard Thompson published a scientific article documenting tiny pieces of plastic that he and his colleagues had discovered and collected

<sup>99</sup> Bruggers, *Booming Plastics Industry Faces Backlash as Data about Environmental Harm Grows*, Inside Climate News (Jan. 24, 2020) <<https://insideclimatenews.org/news/24012020/plastics-marine-oceans-climate-change-oil-gas-carbon-emissions/>> (as of July 29, 2024).

<sup>100</sup> Cal. Ocean Protection Council, *An Implementation Strategy for the California Ocean Protection Council Resolution to Reduce and Prevent Ocean Litter* (Nov. 20, 2008) page 6.

<sup>101</sup> *Ibid.*

1 in the beaches near Plymouth, United Kingdom. Thompson’s study stated that the plastic  
2 particles—which he called “microplastics”—appeared to be disintegrated fragments of larger  
3 pieces of plastic. The number of microplastics from the 1980s and 1990s were much higher than  
4 the numbers from the 1960s and 1970s, suggesting a link between plastic production and creation  
5 of microplastics. The environmental consequences of the microplastics were unknown, but  
6 deemed to warrant further study.

7 221. Suddenly, the public realized that plastics were actually everywhere and posed a  
8 formidable danger.

9 **2. ExxonMobil reuses its old strategy of emphasizing recycling to divert**  
10 **attention from plastic production.**

11 222. ExxonMobil, through its agents, servants and alter-ego industry groups,  
12 disputed that plastic production was to blame for marine pollution. ExxonMobil worked to shift  
13 any focus from itself as a resin producer to the consumers of plastic products. ExxonMobil  
14 claimed that individuals are responsible for pollution through their behavior. Additionally, the  
15 American Chemistry Council (ACC) told the press that “[t]he responsibility is with the people  
16 who control the material, not those who produce it.” ACC further asserted that everyone shares a  
17 responsibility to stop litter in order to prevent plastics from polluting the ocean.

18 223. As in previous decades, ExxonMobil perpetuated the false message that plastics  
19 recycling would solve the problem of plastic waste and pollution, in order to distract the public  
20 from concern over the environmental harm that plastics cause and to allow ExxonMobil to  
21 produce new plastic at accelerating rates. In 2009, the ACC told CNN that most plastics are  
22 recyclable and the next year said “Plastics don’t belong in the ocean—they belong in the  
23 recycling bin. Plastics are a valuable resource—too valuable to waste as litter and as trash.”  
24 ExxonMobil knew that these statements were false or likely to deceive the public, including  
25 knowledge that most plastics could not be recycled at scale, that plastics would end up in the  
26 ocean, and that there was no economic market for recycled plastic.

27 224. ExxonMobil, through the ACC, created new recycling initiatives to deceive the  
28 public into believing that recycling could solve the marine pollution crisis. The ACC advertised

1 that it was working to expand recycling efforts, including recycling of plastic grocery bags,  
2 educating children on marine debris, and campaigning to fight litter.

3 225. ACC organized an Earth Day program with students at 91 Los Angeles  
4 afterschool programs to teach students about recycling. The same campaign ran a competition for  
5 children's soccer teams in Southern California, challenging teams to collect the most recyclable  
6 material in order to educate them on the importance of recycling and reducing litter. The ACC  
7 explained that the children should be proud of their efforts because "the plastics they recycled  
8 will go on to have second and third lives as useful new products."

9 226. In 2009, ACC and Keep America Beautiful partnered with California State  
10 Parks (Parks) to promote recycling by providing recycling bins and signs at beaches throughout  
11 the state. The same program also worked with the City of Los Angeles and the City of Woodland,  
12 California to provide similar signs and recycling bins within those cities. ACC participated in the  
13 California Coastal Cleanup Day, including donating 100,000 plastic bags for collecting waste.  
14 ACC also sponsored a cleanup and recycling education program in San Diego with Parks.  
15 However, ExxonMobil and its trade groups simultaneously aggressively pushed the false promise  
16 of plastic recycling while continuing to saturate the public with ever-increasing amounts of  
17 single-use plastic.

18 **3. ExxonMobil blames Asian countries for ocean plastics, even though**  
19 **the same countries historically imported U.S. plastic waste.**

20 227. Prior to 2017, developed countries like the United States shipped most of their  
21 plastic waste to China. But in 2018, China put in place its National Sword Policy, which banned  
22 certain types of waste and lowered the acceptable rate of contamination of imports of recyclable  
23 waste from five percent to 0.5 percent.

24 228. Most exporters of plastic waste were unable to meet China's new standards,  
25 and, as a result, many of these plastics were landfilled or stored at recycling facilities. No markets  
26 existed for plastic waste labeled with resin numbers 3 through 7. Some plastic waste was diverted  
27 to secondary markets in different East and South Asian countries. Other countries, like Malaysia,  
28 Thailand, and Vietnam, started introducing their own restrictions on the imports of plastic and

1 other waste after becoming inundated with the materials.

2 229. In some areas of the United States, municipal recycling services were forced to  
3 a halt, finding that the lack of a market for recyclables meant that collection costs could no longer  
4 be covered by selling the waste. The City of San Diego was charged over a million dollars by its  
5 waste contractor in 2018. Other California municipalities were required to reduce the materials  
6 collected. Sacramento, for example, ceased collection of plastics with resin numbers 4 through 7  
7 and told residents to throw those items in the garbage.

8 230. In 2020, the ACC lobbied the United States to negotiate with Kenya to accept  
9 imports of U.S. plastics and plastic garbage, in light of U.S. efforts to restrict use of plastic  
10 products at home, and other countries' new unwillingness to accept U.S. plastic garbage.

11 231. The ACC, however, publicly claimed that marine plastic pollution was due to  
12 Asian countries like China, Vietnam, Indonesia, and the Philippines failing to manage their own  
13 waste.

14 232. In or around 2019, ExxonMobil was a founding member of the Alliance to End  
15 Plastic Waste (Alliance), an organization formed to promote recycling, waste collection, and  
16 cleaning areas impacted by plastic waste. Importantly, the Alliance does not promote projects that  
17 limit the production of plastic and does not focus on projects for reuse of plastic. Through the  
18 Alliance, ExxonMobil falsely emphasized and continues to emphasize recycling and waste  
19 management as solutions to the plastic waste crisis, despite their inability to solve the crisis.  
20 ExxonMobil pushed the Alliance to ensure that its mission would not include reducing the  
21 production of plastic.

22 233. Consistent with ExxonMobil's deceptive position that plastic pollution in the  
23 ocean is the fault of developing countries with poor waste management infrastructure, rather than  
24 the inevitable result of unbridled plastic production, many of the Alliance's initiatives focused on  
25 developing countries.

26 234. ExxonMobil's investments and actions through the Alliance, however, merely  
27 create the outward appearance of taking action to address ocean pollution rather than actually  
28 providing any relief. As of 2022, the Alliance had only diverted 34,000 tons of plastic waste from

entering the environment, including plastic that was ultimately landfilled or incinerated. This represents a tiny fraction of the Alliance's goal to divert 15 million tons over its first five years,<sup>102</sup> and a negligible portion of the plastic produced by ExxonMobil that enters the ocean annually.

#### 4. ExxonMobil increased its production of virgin plastics in the 2010s.

235. In the 2010s, ExxonMobil made significant investments into ramping up plastic production in the United States. The glut of ethane produced by increased fracking of natural gas, along with growing awareness of climate change and reduced demand for oil and gas as fuel, made plastics an attractive growth area for petrochemicals. In 2018, the International Energy Agency (IEA) reported that petrochemicals, including plastics, consumed 12 percent of oil globally, but that petrochemicals would account for one third and one half of oil consumption by 2030 and 2050, respectively.

236. In 2017, ExxonMobil started producing polyethylene at its plastics plant in Mont Belvieu, Texas. As of 2022, the plant was producing approximately five billion pounds of low-density and high-density polyethylene products each year.

237. In 2019, ExxonMobil also began producing polyethylene at its plastics plant in Beaumont, Texas. In the late 2010s, Exxon additionally expanded its production of plastics in its Baytown, Texas facility.

238. Operation of another plastics facility in San Patricio County, Texas, owned jointly by ExxonMobil and SABIC, a Saudi Arabian diversified chemicals company, began in 2022, increasing ExxonMobil's global polyethylene capacity by 1.3 million tonnes per year.

239. For decades, the deceptive promise of plastics recycling provided ExxonMobil cover in times of public scrutiny of plastic products and allowed it to continue to produce more and more plastic each year unchecked. This deception continues today.

### III. IN A MODERN TWIST, EXXONMOBIL NOW DECEPTIVELY PROMOTES "ADVANCED RECYCLING" AS THE SOLUTION TO THE PLASTIC WASTE AND POLLUTION CRISIS.

240. In recent years, images depicting the dire harms and costs of the overproduction

<sup>102</sup> Baker et al., *Inside Big Plastic's Faltering \$1.5 Billion Global Cleanup Effort*, Bloomberg (Dec. 20, 2022) <<https://www.bloomberg.com/features/2022-exxon-mobil-plastic-waste-cleanup-greenwashing/>> (as of July 29, 2024).

1 of plastic such as beached whales and dead seabirds with their guts bursting with plastic waste  
2 have flooded the internet and our collective consciousness. Further, an explosion of scientific  
3 research has confirmed that plastic particles have infiltrated our bodies and even the most remote  
4 places on Earth.<sup>103</sup> Justifiably, there has been renewed public outcry over the overproduction of  
5 plastic and proliferation of unnecessary single-use plastics.

6 241. ExxonMobil knows that addressing plastic waste and pollution remains a high  
7 priority for the public. ExxonMobil comprehensively tracks scientific research, articles, and  
8 legislation on plastic waste and pollution, and regularly assesses public opinion about the crisis.  
9 Indeed, internally, ExxonMobil notes that “[o]cean plastic waste [is] a top public concern.” In  
10 response to the Minderoo Foundation’s Plastic Waste Makers Index 2021 report that found that  
11 ExxonMobil is the biggest contributor of single-use plastic waste, internally, ExxonMobil feared  
12 that “[t]he focus may be shifting from the brands/retailers to the producers.”

13 242. ExxonMobil is paying close attention to public opinion because it can hurt  
14 ExxonMobil’s bottom line. ExxonMobil views public concerns about plastic waste, specifically,  
15 about single-use plastic waste, as a “market threat.” ExxonMobil considers the production of  
16 polyethylene and polypropylene used in single-use plastic applications as the “core” of its  
17 chemicals and products portfolio, with “80% of EMCC’s growth [being] dependent on single-use  
18 plastics applications.” Further, the predicted global decline in fossil fuel demand is driving  
19 ExxonMobil to urgently move forward with promoting “advanced recycling” to offset sagging  
20 fuel sales with profits from plastic sales. Thus, ExxonMobil has a strong financial motive to  
21 assuage public concern about plastic waste.

22 243. ExxonMobil has knowingly disregarded the growing number of studies  
23 concluding that a dramatic reduction in plastic production is necessary to address the plastic  
24 waste and pollution crisis. Instead, ExxonMobil has turned to its demonstrably false, timeworn  
25 playbook of convincing the public that we can recycle our way out of the plastic waste and  
26 pollution crisis but with a modern twist: ExxonMobil now claims that “advanced recycling” will  
27 address the shortcomings of mechanical recycling.

28 <sup>103</sup> See Factual Background, Section I.A-C, above.

244. “Advanced recycling” (also known as “chemical recycling”)<sup>104</sup> is an umbrella term used by the plastics industry to describe a variety of heat or solvent-based technologies that can theoretically convert certain types of plastic waste into fuels,<sup>105</sup> chemicals, waxes, and petrochemical feedstock, which, after further refinement, can be used to make new plastic. In the United States and globally, pyrolysis is the most common type of proposed “advanced recycling.” Typically, in a pyrolysis operation, plastic waste is heated in a standalone chamber until it yields liquids, waxes, and gases. The liquid is composed of an oil mixture called “pyrolysis oil” or “pyoil” that includes naphtha and other hydrocarbons. Naphtha is then “cracked” in a petrochemical processing unit called a steam cracker, which breaks down the naphtha further into various hydrocarbon products including ethylene, and propylene. Ethylene and propylene are then polymerized to make plastic (polyethylene and polypropylene). However, very little of the plastic waste that undergoes pyrolysis and subsequent processing makes it out as new plastic. A 2023 study by the National Renewable Energy Laboratory concluded that pyrolysis and gasification (a similar technology) only retained 1 to 14 percent of the plastic waste inputted.<sup>106</sup>

245. On December 14, 2022, ExxonMobil announced the start of its “advanced recycling” program after a “successful” trial at its Baytown Complex in Texas. ExxonMobil claims that its Baytown Complex can “recycle” 40,000 tonnes of plastic waste per year. ExxonMobil claims that, through Baytown and other future ventures, it will process 500,000 tonnes of plastic waste per year by year-end 2026.

246. ExxonMobil’s version of “advanced recycling” involves “co-processing” plastic waste. Similar to standalone pyrolysis units, co-processing uses heat to break down plastic waste. But instead of doing so in a standalone chamber, plastic waste is fed into a preexisting oil refinery processing unit called a coker. A miniscule amount of plastic waste is mixed into a large amount of residual refinery materials (materials such as heavy oils and asphalts produced as byproducts

<sup>104</sup> The plastics industry often uses the terms “advanced recycling” and “chemical recycling” interchangeably.

<sup>105</sup> As explained below, any process that creates fuels from plastics is not considered to be “recycling.”

<sup>106</sup> Uekert et al., *Technical, Economic, and Environmental Comparison of Closed-Loop Recycling Technologies for Common Plastics* (2023) 11 American Chemical Society Sustainable Chemistry & Engineering 965, 969.

of the distillation of crude oil in a refinery), and together they undergo the coking (heating) process. The coking process yields mostly pyrolysis oil liquids and a small amount of pyrolysis gas including ethane. Most “advanced recycling” operations that use pyrolysis technologies use naphtha (a component of pyrolysis oil) as a feedstock for steam cracking. However, at its Baytown Complex—the heart of ExxonMobil’s “advanced recycling” program—ExxonMobil operates ethane steam crackers, not naphtha steam crackers. ExxonMobil feeds the small amount of pyrolysis gas ethane produced from the coking process, alongside a much, much larger stream of virgin ethane gas, into the ethane steam cracker to produce ethylene and propylene, some of which is then polymerized to make plastic. The Baytown Complex does not feed naphtha into ethane steam crackers. Naphtha produced in the coking process is instead used to primarily produce fuels.

247. ExxonMobil calls the final product of its “advanced recycling” process “certified circular polymers” and has announced the sale of these plastics to large plastic packaging and product manufacturers, including but not limited to, Amcor, Berry Global, Pactiv Evergreen, Pregis, Printpack, and Sealed Air.<sup>107</sup>

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<sup>107</sup> See, e.g., ExxonMobil Chemical, *News Release: Amcor Increases Use of Advance Recycling Materials Leveraging ExxonMobil’s Exxtend Technology* (Apr. 12, 2022) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/93281/amcor\\_release\\_exxtend\\_en](https://www.exxonmobilchemical.com/en/resources/library/library-detail/93281/amcor_release_exxtend_en)> (as of July 29, 2024); ExxonMobil, *News Release: ExxonMobil Makes First Commercial Sale of Certified Circular Polymers* (Feb. 24, 2022) <[https://corporate.exxonmobil.com/news/news-releases/2022/0224\\_exxonmobil-makes-first-commercial-sale-of-certified-circular-polymers](https://corporate.exxonmobil.com/news/news-releases/2022/0224_exxonmobil-makes-first-commercial-sale-of-certified-circular-polymers)> (as of July 29, 2024); ExxonMobil Chemical, *Press Release: Pactiv Evergreen and ExxonMobil Collaborate to Leverage Advanced Recycling for Foodservice Industry Packaging* (Sept. 27, 2023) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/109338/pactiv\\_evergreen\\_and\\_exxonmobil\\_collaborate\\_to\\_leverage\\_advanced\\_recycling\\_for\\_foodservice\\_industry\\_packaging\\_en/](https://www.exxonmobilchemical.com/en/resources/library/library-detail/109338/pactiv_evergreen_and_exxonmobil_collaborate_to_leverage_advanced_recycling_for_foodservice_industry_packaging_en/)> (as of July 29, 2024); ExxonMobil Chemical, *Press Release: Pregis Introduces Circular Innovation to PE Foam Solutions* (Feb. 21, 2024) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/111456/pregis\\_advanced\\_recycled\\_foam\\_press\\_release\\_february\\_2024/](https://www.exxonmobilchemical.com/en/resources/library/library-detail/111456/pregis_advanced_recycled_foam_press_release_february_2024/)> (as of July 29, 2024); Printpack, *Printpack, ExxonMobil, Pacific Coast Producers Bring Circularity to Fruit Cups* (Aug. 29, 2023) Packaging World <<https://www.packworld.com/supplier-news/news/22871469/printpack-printpack-exxonmobil-pacific-coast-producers-bring-circularity-to-fruit-cups/>> (as of July 29, 2024); ExxonMobil Chemical, *News Release: ExxonMobil, Cyclyx, Sealed Air, and Ahold Delhaize USA Demo Advanced Recycling for Plastic Waste* (Apr. 27, 2023) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/107131/circularity\\_demo\\_press\\_release\\_en](https://www.exxonmobilchemical.com/en/resources/library/library-detail/107131/circularity_demo_press_release_en)> (as of July 29, 2024).

248. ExxonMobil boldly heralds this “proprietary advanced recycling technology” as a breakthrough in recycling technology. But this purported breakthrough technology has been available to ExxonMobil to employ in their production operations for decades. In fact, Mobil patented the co-processing of plastic waste in cokers in 1978.<sup>108</sup> And both Exxon and Mobil conducted co-processing pilots in the 1990s, neither of which continued beyond the trial phase as public attention on plastic waste dwindled at that time.

249. Nevertheless, almost half a century after Mobil originally patented the co-processing of plastic waste, ExxonMobil attempts to rebrand this technology as the “new” and “advanced” solution in order to appease renewed public concern over plastic waste and pollution.

250. Internal communications show that ExxonMobil is advocating for public acceptance of “advanced recycling” “to avoid the ‘negative’ impacts/consequences of the looming implementation/adoption of the circular economy way of thinking.” ExxonMobil admits that its driving motivation behind its “advanced recycling” push is that “the public perception benefits received will be invaluable ... even if it proves to not be financially sustainable.” This startling admission harkens back to former Exxon Chemical vice president Irwin Levowitz’s 1994 admission that Exxon was “committed to the activities [of recycling plastic], but not committed to the results.”

251. ExxonMobil’s aggressive promotion and marketing of “advanced recycling” deceives its customers, investors, and the public at large. This modern-day campaign of deception regarding “advanced recycling” is apparently working. ExxonMobil internally notes that “[r]esearch shows that the public is increasingly aware of plastics issues but favorably receptive to advanced recycling messages.” Like its promotion of mechanical recycling decades ago, ExxonMobil’s promotion of “advanced recycling” is another deceptive marketing campaign designed to encourage unabated consumption of its plastic products, rather than a real solution to the extraordinarily harmful plastic waste and pollution crisis that ExxonMobil’s deception substantially caused and continues to exacerbate.

<sup>108</sup> Yan, Mobil Oil Corporation, Conversion of Solid Wastes to Fuel Coke and Gasoline/Light Oil, U.S. Patent 4,118,281 (Oct. 3, 1978).

**A. ExxonMobil Conceals the Technical Limitations of Its “Advanced Recycling” Program.**

252. ExxonMobil promotes its “advanced recycling” program as a technological wonder. However, a closer look reveals that ExxonMobil has misled the public about the technical capabilities of its co-processing technology.

**1. ExxonMobil destroys most of the plastic waste it co-processes.**

253. When a company claims that it “recycles” plastic waste, a reasonable consumer would believe that most of the plastic waste that enters the recycling process would end up as new plastic. In misleading statements in interviews and articles, ExxonMobil repeatedly suggests that most or all of the plastic waste it co-processes in its “advanced recycling” program becomes new plastic. However, as explained below, only a small portion of the plastic waste input actually becomes new plastic. Examples of ExxonMobil’s deceptive talking points include:

- “Advanced recycling . . . break[s] down materials to their molecular level. These ‘refreshed’ molecules then become the raw materials used to make brand-new plastics and other valuable products. It truly gives a new life to plastic waste.”<sup>109</sup>
- “[U]nlike mechanical recycling—where each round of recycling degrades the plastic—there are no evident technical limitations regarding how many times a plastic product can be put through advanced recycling processes.”<sup>110</sup>
- “That molecule will go into our unit where it will be broken down to its molecular level and that molecule will end up becoming new plastic.”<sup>111</sup>
- “Our process is efficient, converting about 90% of the plastic waste into raw

<sup>109</sup> ExxonMobil, *Advanced Recycling: A Different Way to Handle Used Plastics* <<https://corporate.exxonmobil.com/what-we-do/materials-for-modern-living/a-different-way-to-handle-used-plastics>> (as of July 29, 2024).

<sup>110</sup> McKee, President, ExxonMobil Product Solutions, *ExxonMobil Steps Up Advanced Recycling to Help Address Plastic Waste* (Mar. 30, 2021) <<https://corporate.exxonmobil.com/news/viewpoints/steps-up-advanced-recycling-plastic-waste#:~:text=And%20unlike%20mechanical%20recycling%20%E2%80%93%20where%20each%20round,product%20can%20be%20put%20through%20advanced%20recycling%20processes>> (as of July 29, 2024).

<sup>111</sup> KPRC 2, *Efforts of Advanced Recycling* (Feb. 16, 2023, updated July 22, 2024) Click2Houston.com <<https://www.click2houston.com/video/news/2023/02/16/efforts-of-advanced-recycling/>> (as of July 29, 2024).

materials.”<sup>112</sup>

- “It is a facility that is taking difficult to recycle plastics, plastics that would otherwise end up in a landfill or incineration, and we are putting them into this unit producing high quality raw materials that can then be used to make new plastic products.”<sup>113</sup>
- The output is “high performance circular polymer. This is one of the beauties of this process. We can take plastic waste in and convert it into materials with the same quality as you have today.”<sup>114</sup>
- “For every pound of certified circular plastic our customers buy from us, they can be confident that at least one pound of plastic waste was removed from the environment and from the waste stream.”<sup>115</sup>

254. These types of statements misleadingly suggest that ExxonMobil’s “advanced recycling” technology achieves 100 percent yield, i.e. that most or all of the plastic waste inputted in the process becomes new plastic or other environmentally beneficial products.

255. However, 100 percent yield to new plastics, or anywhere close to it, is technically impossible, and ExxonMobil knows this. At its Baytown Complex—currently the site of ExxonMobil’s only active “advanced recycling” unit—a mere **eight percent** of the plastic waste ExxonMobil co-processes in its cokers and ethane steam crackers becomes new plastics. The remaining 92 percent of the plastic waste co-processed becomes primarily fuels, which are ultimately destroyed after they are combusted. Therefore, ExxonMobil’s claims that there are no limitations to endlessly recycling plastic waste are false because 92 percent of the plastic waste is

<sup>112</sup> Zamora, Senior Vice President, ExxonMobil Product Solutions, *ExxonMobil: Bringing Advanced Recycling to Life* (Nov. 14, 2023) Consumer Brands Assn. <<https://consumerbrandsassociation.org/blog/exxonmobil-bringing-advanced-recycling-to-life/>> (as of July 29, 2024).

<sup>113</sup> BIC Magazine, *ExxonMobil Starts Up Large-Scale Advanced Recycling Facility in Baytown, Texas* (Apr. 23, 2023) YouTube <<https://www.youtube.com/watch?v=pslh0tx4oUI>> (as of July 29, 2024).

<sup>114</sup> *Ibid.*

<sup>115</sup> See, e.g., Skewes, *ExxonMobil Advanced Recycling Changes Plastic’s Destiny*, The Baytown Sun (Apr. 16, 2023) <[https://baytownsun.com/local/exxonmobil-advanced-recycling-changes-plastic-s-destiny/article\\_86e61a0e-da32-11ed-a571-cb855cdf8807.html/](https://baytownsun.com/local/exxonmobil-advanced-recycling-changes-plastic-s-destiny/article_86e61a0e-da32-11ed-a571-cb855cdf8807.html/)> (as of July 29, 2024).

1 destroyed (not made into new plastics) in each processing cycle. But the low yield is not due to  
 2 using pyrolysis gas ethane as the feedstock to the crackers. In a potential future “advanced  
 3 recycling” project at another ExxonMobil Gulf Coast plant site that would employ pyrolysis oil  
 4 naphtha as the feedstock to naphtha steam crackers, a mere 13 percent of the plastic waste would  
 5 become new plastics.

6 256. ExxonMobil, of course, omits this critical piece of information in public  
 7 statements. ExxonMobil knows that its “advanced recycling” program would not gain traction  
 8 and public acceptance if it had to admit that most of what it yields is not plastic but rather fuels.  
 9 The truth is ExxonMobil’s “advanced recycling” program is less like a recycling program, and  
 10 more like a waste disposal or destruction program akin to the incineration solutions advocated by  
 11 ExxonMobil in the past.

12 **2. ExxonMobil’s “certified circular polymers” are effectively virgin**  
 13 **polymers due to inherent technical equipment limitations.**

14 257. When plastic is mechanically recycled, the plastic downgrades, and the final  
 15 product is aesthetically unpleasing or unsafe to use for things like food packaging or medical  
 16 applications. ExxonMobil claims that its “advanced recycling” technology solves that dilemma,  
 17 as its “certified circular polymers are identical to polymers produced from virgin raw  
 18 materials.”<sup>116</sup> ExxonMobil has even announced sales to major converters (companies that  
 19 specialize in transforming raw plastic materials into finished products) and brands touting that its  
 20 “certified circular polymers” can and would be used in food-safe applications such as fruit cups  
 21 and food packaging.<sup>117</sup> These “certified circular polymers” would be produced at its Baytown  
 22 facility.

23 258. ExxonMobil is correct that its “certified circular polymers” are, in fact, identical  
 24 to its virgin polymers. But this is not because co-processing magically transforms plastic waste  
 25 into virgin-like plastics. They are identical because, as explained below, ExxonMobil’s “certified

26 <sup>116</sup> ExxonMobil, *News Release: ExxonMobil Makes First Commercial Sale of Certified*  
 27 *Circular Polymers, supra.*

28 <sup>117</sup> Printpack, *Printpack, ExxonMobil, Pacific Coast Producers Bring Circularity to Fruit*  
*Cups, supra*; ExxonMobil, *Press release: Pactiv Evergreen and ExxonMobil Collaborate to*  
*Leverage Advanced Recycling for Foodservice Industry Packaging, supra.*

1 circular polymers” actually contain virtually no waste plastic.

2 259. Oil and gas refinery and petrochemical units are not designed to process large  
3 volumes of plastic waste, which contains a wide range of corrosive additives and contaminants. In  
4 order to protect its expensive equipment, ExxonMobil caps the amount of plastic waste it feeds  
5 into its cokers at only one to two percent of the total amount inputted, meaning that *98 to 99*  
6 *percent of the coker’s feed is comprised of virgin refinery residual materials*. Accordingly, any  
7 pyrolysis oil or pyrolysis gas produced will be overwhelmingly derived from virgin materials.  
8 Indeed, an independent study of ExxonMobil’s plastic co-processing operations found that  
9 feeding only one to two percent plastic waste is such an insignificant proportion of the total  
10 flexicoker feed that the plastic waste “should all but disappear in the coking process.”<sup>118</sup> The  
11 study concludes that ExxonMobil could even feed one percent parking lot dirt into its cokers and  
12 not upset the process because of dilution.<sup>119</sup>

13 260. As noted above, the 40,000 tonnes of plastic waste ExxonMobil purportedly co-  
14 processes at Baytown per year yields predominantly pyrolysis oil liquids. It yields a small amount  
15 of pyrolysis gas including ethane. ExxonMobil then mixes this small amount of ethane with a  
16 much, much larger stream of virgin ethane, and together they are fed into an ethane steam cracker  
17 to make ethylene and propylene.

18 261. According to internal documents, the amount of plastic-derived ethane only  
19 constitutes **0.09 percent** of the total ethane stream fed into the ethane steam cracker at Baytown.  
20 This means that any plastic made from the resulting ethylene and propylene could only be  
21 composed of a maximum of **0.09 percent** plastic waste.

22 262. However, in May 2024, ExxonMobil stated that it did not process plastic waste  
23 at the full 40,000 tonnes/year design capacity of the Baytown “advanced recycling” facility, but  
24 rather processed only 22,000 tonnes of plastic waste over 15 months.<sup>120</sup> Based on this actual

25 <sup>118</sup> Nix, Green Group Consulting, Plastic Recycling – Challenges and Opportunities (Feb.  
26 6, 2023) page 15.

<sup>119</sup> *Ibid.*

27 <sup>120</sup> ExxonMobil, *Doubling Down on Advanced Recycling in Baytown* (May 6, 2024)  
28 <<https://corporate.exxonmobil.com/what-we-do/materials-for-modern-living/advanced-recycling-baytown->

(continued...)

operating data, the average amount of plastic made from “advanced recycling,” or plastic waste, would only constitute **0.042 percent** of the total amount of plastic produced at Baytown on an annual basis.

263. With a maximum physical content of just 0.042 to 0.09 percent plastic waste, ExxonMobil’s “advanced recycling” effectively produces a product that is made almost entirely of virgin (new) plastic, but which it nonetheless markets as being a “circular” plastic polymer. In other words, ExxonMobil’s “certified circular polymers” *effectively are* virgin (new) plastics.

**3. ExxonMobil’s “advanced recycling” technology cannot process large volumes of mixed post-consumer single-use plastic waste.**

264. When thinking about the plastic waste and pollution crisis, the public generally is most concerned about post-consumer single-use plastic waste—plastic packaging such as potato chip bags and plastic cups that leak into and visibly pollute the environment. ExxonMobil claims to be able to “recycle” these types of everyday plastic products through its “advanced recycling” program “to help reduce plastic waste in the environment.”<sup>121</sup> According to ExxonMobil, “[a]dvanced recycling also helps remove contaminants, and it can accommodate mixed and soiled plastic waste.”

265. For example, in a blog post, ExxonMobil describes its “advanced recycling” capability as follows: “Imagine your discarded yogurt containers being transformed into medical equipment for your next doctor’s appointment, and then into the dashboard of your next fuel-efficient car.”<sup>122</sup> On a radio interview, ExxonMobil claimed to be able to process “motor oil bottles with oily residue in it, the bubble wrap we get in our latest Amazon packages, pet food bags, chip bags, candy wrappers.” In a video interview, ExxonMobil states: “What we put on the front end here is a really special unit that gets solid plastic waste and all kinds of different

[unit#:~:text=%E2%80%9CThe%20interest%20from%20our%20customers,sustainability%20pledges%2C%E2%80%9D%20Mastroleo%20said> \(as of July 29, 2024\).](#)

<sup>121</sup> ExxonMobil, *News Release: ExxonMobil Tests Advanced Recycling of Plastic Waste at Baytown Facilities* (Feb. 25, 2021) <<https://corporate.exxonmobil.com/news/news-releases/2021/0225-exxonmobil-tests-advanced-recycling-of-plastic-waste-at-baytown-facilities>> (as of July 29, 2024).

<sup>122</sup> McKee, President, ExxonMobil Product Solutions, *ExxonMobil Steps Up Advanced Recycling to Help Address Plastic Waste*, *supra*.

1 varieties into a unit so that we can process it into a raw material that other units can use.”<sup>123</sup>

2 266. ExxonMobil wants the public to believe that its “advanced recycling” program  
3 can process mixed and post-consumer plastics that mechanical recycling cannot.

4 267. However, pyrolysis “advanced recycling,” or “chemical recycling,” technology  
5 cannot process high volumes of mixed post-consumer plastic waste like potato chip bags and  
6 candy wrappers. Indeed, a recent study commissioned by the Association of Plastic Recyclers  
7 confirmed that mixed post-consumer film and flexible packaging (FFP) is not currently suitable  
8 for pyrolysis “advanced recycling.”<sup>124</sup> Despite publicly promoting its “advanced recycling”  
9 program as addressing our everyday residential plastic waste, ExxonMobil knows that such  
10 plastic waste is too contaminated, has too many additives that can harm refinery equipment, and  
11 is too compositionally and chemically variable to safely co-process in cokers and then steam  
12 crackers in large volumes.

13 268. Internally, ExxonMobil flags contaminant management as the “Biggest  
14 Challenge” of co-processing plastic waste. ExxonMobil characterizes the “[i]mpacts [of  
15 contaminants] on unit operability from processing plastics” as a technical risk.

16 269. ExxonMobil’s own chemical engineers internally caution that contaminants  
17 from plastic may pose a performance risk to its equipment.

18 270. Additionally, an internal ExxonMobil document admits that “[n]ot all post-use  
19 plastics are appropriate for chemical recycling” and “[n]ot all post-use plastics are appropriate as  
20 feedstock for all chemical recycling product pathways.” Because of this, ExxonMobil internally  
21 concluded that “[c]ontaminant mgmt. requires tailoring of accessible feed.”

22 271. ExxonMobil’s solution to this problem is to only use clean, clear, and  
23 compositionally uniform plastic primarily from post-commercial and post-industrial sources—  
24 things like clear plastic wraps used by businesses on pallets and bubble wrap.<sup>125</sup> For example, in

25 <sup>123</sup> BIC Magazine, *ExxonMobil Starts Up Large-Scale Advanced Recycling Facility in*  
26 *Baytown, Texas, supra.*

27 <sup>124</sup> Eunomia Research & Consulting, *How to Scale the Recycling of Flexible Film*  
28 *Packaging: Modeling Pyrolysis’ Role in Collection, Quantity and Costs of a Comprehensive*  
*Solution* (Mar. 2024) page 6.

<sup>125</sup> Internal documents show that ExxonMobil is struggling to secure an adequate amount  
(continued...)

one of its agreements for collecting plastic waste to use as feedstock at its Baytown “advanced recycling” facility, ExxonMobil explicitly directs its partner, Cyclyx, to collect “Post-Use Plastic,” which is defined to include pre-consumer material such as clean industrial waste. In addition, in the same agreement, ExxonMobil explicitly specifies that polystyrene—which includes Styrofoam and common items such as red plastic cups and plastic plates—is to be minimized. Polystyrene foam foodware, such as cups and plates, is known to make up a substantial amount of particularly pernicious plastic waste and pollution, leading to several attempts to ban such products in California.<sup>126</sup>

272. Despite understanding the technical limitations of co-processing mixed post-consumer plastic waste, ExxonMobil tailored its public messaging to convince the public that ExxonMobil is addressing post-consumer plastic waste from non-commercial and non-industrial sources. For example, ExxonMobil’s partner, Cyclyx, proposed a press release that explained that “Cyclyx will source post-use mixed waste plastic for [its circularity center] via *existing commercial and industrial sources*.” ExxonMobil’s Vice-President for Sustainability struck the words “existing commercial and industrial sources” and explained to Cyclyx that the “language seems a bit restrictive regarding feed sources (i.e. one ‘existing commercial and industrial’) and could be interpreted as not collaborative with existing municipal waste. I changed the language to something a bit more aspirational and collaborative.” ExxonMobil suggested alternative “aspirational” language, which was ultimately used in the final release. The final release reads: “Cyclyx will source post-use mixed waste plastic for [its circularity center] via a range of existing sources and is continuing to expand its collaboration with companies from across the value chain to develop circular solutions for difficult-to-recycle plastic waste.”

#### **B. ExxonMobil Deceives Its “Certified Circular Polymer” Customers.**

273. As noted above, ExxonMobil’s “advanced recycling” program effectively

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of plastic waste suitable for its co-processing operation so that it has actively sought other types of non-single-use-plastic materials such as used cooking oil, artificial turf, and waste tires to co-process in an effort to keep pace with its publicly-stated “recycling” goals and customer demand.<sup>126</sup> See Factual Background, Section II, above; see also Cal. Coastal Com., *California Coastal Cleanup Day History* <<https://www.coastal.ca.gov/publiced/ccd/history.html>> (as of July 29, 2024).

1 produces virgin polymers, because only a tiny amount of plastic waste is fed to the process and  
 2 only eight percent of that plastic waste is potentially converted to new plastics, resulting in plastic  
 3 end products with a plastic waste content of about 0.042 to 0.09 percent. In other words,  
 4 “advanced recycling,” at best, results in new plastic products that are 99.958 to 99.91 percent  
 5 virgin (new) plastic on an annual basis. Nevertheless, ExxonMobil markets these polymers as  
 6 “certified circular polymers”—brazenly claiming that they were made from plastic waste, even  
 7 though they may contain very little or no recycled plastic at all.

8         274. ExxonMobil closely follows announcements by major converters, brands, and  
 9 retailers about their respective commitments to incorporate more recycled plastic in their product  
 10 offerings. ExxonMobil is aware that these large companies are willing to pay more money for  
 11 recycled plastics. Accordingly, ExxonMobil regularly conducts outreach to these companies to  
 12 persuade them to purchase its “certified circular polymers,” including companies based in or that  
 13 otherwise do business in California. For example, ExxonMobil announced a partnership with  
 14 Printpack, a packaging converter, and Pacific Coast Producers, a California-based agricultural  
 15 company that produces various fruit products, to package certain fruit cups using ExxonMobil’s  
 16 “certified circular polymers.”<sup>127</sup> These fruit cups, which are deceptively promoted as having  
 17 “30% ISCC PLUS certified-circular content” have reached California consumers.<sup>128</sup>

18         275. Over the last few years, ExxonMobil has announced the sale of its “certified  
 19 circular polymers” to other large plastic packaging and product manufacturers, including but not  
 20 limited to, Amcor, Berry Global, Pactiv Evergreen, Pregis, and Sealed Air. These announcements  
 21 give the public the impression that ExxonMobil’s “certified circular polymers” from “advanced  
 22 recycling” have significant environmental benefits, are part of a “circular economy,” and “expand  
 23 the range of plastic materials that society recycles.”<sup>129</sup>

24         276. However, internal documents show that ExxonMobil’s sales of its “certified

25         <sup>127</sup> Printpack, *Printpack, ExxonMobil, and Pacific Coast Producers Bring Circularity to*  
 26         *Fruit Cups, supra*.

26         <sup>128</sup> ISCC PLUS certification is discussed in detail in Section III.D, below.

27         <sup>129</sup> ExxonMobil, *ExxonMobil Makes First Commercial Sale of Certified Circular*  
 28         *Polymers, supra*; indeed, ExxonMobil uses the terms “circular,” “recycled,” and “recycled  
 content” interchangeably in its various and many public announcements for its “advanced  
 recycling” technology and products.

1 circular polymers” are based on the deception that for every ton of plastic waste inputted into its  
 2 process, nearly a ton of “certified circular polymers” is produced—i.e., 92.6 to 100 percent yield.  
 3 ExxonMobil then charges a premium to its customers for these “certified circular polymers.” As  
 4 noted above, ExxonMobil destroys or turns into fuel (that will later be combusted) and other non-  
 5 circular products most of the plastic waste it feeds into its “advanced recycling” operation. If any  
 6 plastic waste is converted to new “recycled” plastic, at most it will constitute only 0.042 to 0.09  
 7 percent of the new plastic sold on an annual basis. Therefore, these customers are essentially  
 8 purchasing virgin plastics masquerading as “recycled” plastics.

9       277. Neither the average person, nor California law or federal policymakers,  
 10 understand this to be “recycling.” The definition of “recycling” in the California Public Resources  
 11 Code explicitly does not include plastic waste processed via pyrolysis or incineration.<sup>130</sup>  
 12 California Public Resources Code section 40180 clearly defines “Recycling” and specifically  
 13 states that it does not include “Transformation.” Public Resources Code section 40201 states:  
 14 “‘Transformation’ means incineration, **pyrolysis**, distillation, or biological conversion other than  
 15 composting.” (Emphasis added.) Likewise, Public Resources Code section 42355.51, subdivision  
 16 (f), states that “recycling,” “recyclable,” and “recyclability” do not include transformation, as  
 17 defined in Section 40201, . . . or production of fuels.” In addition, in its Draft National Strategy to  
 18 Prevent Plastic Pollution, the United States Environmental Protection Agency recently reaffirmed  
 19 its position that it does not consider plastic waste that is processed into fuels or for energy  
 20 production as “recycling.”<sup>131</sup>

21       278. ExxonMobil is also misleading its customers regarding the greenhouse gas  
 22 (GHG) reduction benefits of its “advanced recycling” process. ExxonMobil proactively and  
 23 repeatedly states that the materials produced through this process have a lower carbon footprint  
 24 compared to plastic made from fossil fuels.<sup>132</sup> However, a closer examination reveals significant

25       <sup>130</sup> Pub. Resources Code, § 40180.

26       <sup>131</sup> EPA Office of Resource Conservation and Recovery, U.S. Environmental Protection  
 27 Agency, Draft National Strategy to Prevent Plastic Pollution, *supra* [“EPA reaffirms that the  
 28 Agency does not consider activities that convert non-hazardous solid waste to fuels or fuel  
 substitutes (“plastics-to-fuel”) or for energy production to be “recycling” activities.”].

<sup>132</sup> ExxonMobil, *ExxonMobil Shares Carbon Footprint Assessment of Proprietary*

(continued...)

gaps and misleading claims.

279. ExxonMobil publicly claims that its “advanced recycling” technology enhances the circularity of plastics with reduced GHGs on a feedstock basis, but does not disclose the GHG emissions on the full plastic production basis that is needed to make an accurate comparison. For instance, in its 2023 Advancing Climate Solutions Progress Report, ExxonMobil stated, “Our advanced recycling technology enhances the circularity of plastics with reduced greenhouse gas emissions on a feedstock basis. According to a 2022 carbon footprint assessment by Sphera, every ton of waste plastic processed using our advanced recycling technology results in at least 19% lower greenhouse gas emissions compared to processing the same amount of crude-based feedstocks.”<sup>133</sup> Additionally, ExxonMobil states on its website that “waste plastic has a relatively low carbon footprint compared to fossil-based feedstock.”<sup>134</sup>

280. Contrary to ExxonMobil’s claims, full product life cycle assessments conducted by plastic producers like BASF<sup>135</sup> and SABIC<sup>136</sup> consistently show that the total carbon footprint for producing new olefins through pyrolysis of plastic waste and naphtha steam cracking exceeds that of virgin hydrocarbons. The BASF report found that pyrolysis of plastic waste to produce new plastic can only be claimed to emit less CO<sub>2</sub> (GHG) than production from virgin hydrocarbons if significant hypothetical savings of CO<sub>2</sub> (GHG) emissions from incineration of end-of-life plastic waste are included.”<sup>137</sup>

281. A separate Sphera report on plastic film recycling, commissioned by the Consumer Goods Forum (CGF), confirms that GHG emissions from pyrolysis “advanced recycling” and naphtha steam cracking are lower than emissions from virgin plastic production

*Advanced Recycling Technology* <[<sup>133</sup> ExxonMobil, 2023 Advancing Climate Solutions Progress Report \(Dec. 15, 2022\).](https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/carbon#:~:text=The%20following%20conclusions%20are%20from,amount%20of%20fossil%20based%20feedstock/> (as of July 29, 2024).</a></p>
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<sup>134</sup> ExxonMobil, *ExxonMobil Shares Carbon Footprint Assessment of Proprietary Advanced Recycling Technology*, *supra*.

<sup>135</sup> BASF, *Life Cycle Assessment (LCA) for ChemCycling and Measurement Program for Pyrolysis Oil* (Dec. 2023).

<sup>136</sup> SABIC, *Certified Circular Polymers via Advanced Recycling of Mixed Plastic Waste* (Mar. 2021).

<sup>137</sup> BASF, *ChemCycling: Environmental Evaluation by Life Cycle Assessment* (May 2020)

page 5.

1 **only** when the latter includes the hypothetical carbon emissions from incinerating virgin plastic  
 2 products at end of life.<sup>138</sup> However, when compared to producing and then landfilling virgin  
 3 plastic products (where end of life carbon emissions are not counted), the report finds that  
 4 “advanced recycling” emissions are 20 percent higher.<sup>139</sup> The CGF Sphera report indicates that  
 5 “advanced recycling” emissions are lower than emissions from virgin plastic when 45 percent of  
 6 virgin plastic is incinerated at end-of-life.<sup>140</sup> The assumption that 45 percent of virgin plastic is  
 7 incinerated at end-of-life is not credible because it is far higher than the current nine percent  
 8 plastic incineration rate in the U.S. according to the U.S. Department of Energy.<sup>141</sup> In California,  
 9 only about one percent of municipal waste is incinerated (transformed).<sup>142</sup>

10 282. Furthermore, the CGF Sphera report includes the hypothetical carbon emissions  
 11 from incinerating virgin plastic products at the end of life while omitting GHG emissions from  
 12 incinerating “advanced recycling” products at end-of-life, skewing the comparison in favor of  
 13 “advanced recycling.” Thus, claims that “advanced recycling” inherently results in lower GHG  
 14 emissions are based on the inclusion of inflated and deceptive assumptions about end-of-life  
 15 scenarios.

16 283. The American Chemistry Council, of which ExxonMobil is a member and  
 17 provides millions of dollars,<sup>143</sup> also touts the climate change benefits of ExxonMobil’s “advanced  
 18 recycling” process, stating: “In addition, co-processing plastic waste via ExxonMobil’s advanced  
 19 recycling approach results in lower greenhouse gas emissions than using virgin feedstocks when  
 20 analyzed on an ISO 14067 feedstock basis (ExxonMobil estimates; cradle-to-process unit outlet  
 21

22  
 23 <sup>138</sup> Sphera, *Life Cycle Assessment of Chemical Recycling for Food Grade Film, On behalf*  
 24 *of the Consumer Goods Forum* (Apr. 7, 2022) page 52 <[Life-Cycle-Assessment-of-Chemical-Recycling-for-Food-Grade-Film.pdf](#)> (as of July 29, 2024).

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

25 <sup>141</sup> Milbrandt et al., *Quantification and Evaluation of Plastic Waste in the United States*  
 26 (Apr. 22, 2022) Resources, Conservation and Recycling page 4 (funded by the U.S. Dept. of  
 27 Energy).

<sup>142</sup> Cal. Dept. of Resources Recycling and Recovery (CalRecycle), 2022 State of Disposal  
 27 and Recycling Report (Feb. 8, 2024) page 6 (Figure 1 “Estimated Management of 76 Million  
 28 Tons of Materials Generated in California in 2022”).

<sup>143</sup> See Parties Section III, above.

boundary).”<sup>144</sup>

284. Yet, ExxonMobil will not stand behind its process and product’s climate benefits and GHG emission reduction claims. To the contrary, ExxonMobil does not provide the Sphera Co-Processing Life Cycle Assessment Report to the public,<sup>145</sup> and, tellingly, it states elsewhere that its ISCC PLUS “certification” of its “certified circular polymers” is not a claim of GHG benefits.<sup>146</sup> While ExxonMobil publicly claims significant GHG reductions through its “advanced recycling” processes, these assertions are based on selective data presentation and problematic assumptions that mislead consumers.

**C. ExxonMobil Deceptively Suggests That Its “Advanced Recycling” Program Will Solve the Plastic Waste and Pollution Crisis, When in Reality It Will Only Account for 1 Percent or Less of Its Total Plastic Production Capacity by 2026.**

285. ExxonMobil makes public statements claiming that “advanced recycling” can “scale” to solve the global plastic waste and pollution crisis. Publicly, ExxonMobil claimed that the company’s advanced recycling operation was a “proven technology that is scalable.”

286. While ExxonMobil makes claims that “advanced recycling” is a revolutionary invention that would “scale” to solve the global plastic waste and pollution crisis, in reality ExxonMobil’s “advanced recycling” program will not even make a dent in displacing its own virgin plastic production. And ExxonMobil knows this. Its own chemical engineers point out that because the yield of its “advanced recycling” process is so low, “there will continue to be a growing need for virgin resin even as recycle rates are anticipated to increase.”

<sup>144</sup> American Chemistry Council, *ExxonMobil Working to Advance Plastics Recycling in Houston and Beyond* (June 7, 2022) <<https://www.americanchemistry.com/chemistry-in-america/news-trends/blog-post/2022/exxonmobil-working-to-advance-plastics-recycling-in-houston-and-beyond/>> (as of July 29, 2024).

<sup>145</sup> Bruggers, *Exxon’s New ‘Advanced Recycling’ Plant Raises Environmental Concerns*, *The Guardian* (Apr. 10, 2023) <<https://www.theguardian.com/us-news/2023/apr/10/exxon-advanced-recycling-plastic-environment/>> (as of July 29, 2024); Inside Climate News, *The Missing Equations at ExxonMobil’s Advanced Recycling Operation* (Nov. 1, 2023) <<https://insideclimatenews.org/news/01112023/missing-equations-exxonmobils-advanced-recycling-operation/>> (citing independent chemical engineer who called ExxonMobil’s climate estimates “dubious”) (as of July 29, 2024).

<sup>146</sup> ExxonMobil, *Expanding the Plastics Life Cycle* (Jan. 8, 2024) <<https://corporate.exxonmobil.com/sustainability-and-reports/sustainability/creating-sustainable-solutions/expanding-the-plastics-life-cycle#Strengtheningcircularitywithadvancedrecycling/>> (as of July 29, 2024); ISCC PLUS certification is discussed in more detail, *post*.

1           287.       According to documents filed by ExxonMobil with the U.S. Securities and  
2 Exchange Commission from 2008 to 2023, ExxonMobil’s plastic-making capacity (including  
3 polyethylene and polypropylene) increased 56 percent from 9.3 million tonnes in 2008 to 14.5  
4 million tonnes per year in 2023.

5           288.       ExxonMobil proudly boasts that by the end of 2026 it will process 500,000  
6 tonnes of plastic waste per year through its “advanced recycling” program. Based on  
7 ExxonMobil’s yield of only eight percent to new plastic, only 40,000 tonnes of new plastic would  
8 be produced from recycled plastic. This 40,000 tonnes of new plastic made from recycled plastic  
9 would only constitute a very small **0.27 percent** of ExxonMobil’s total plastic production  
10 capacity of 14.5 million tonnes in 2023. This is not surprising given that ExxonMobil has  
11 invested an unprecedented \$20 billion under its “Growing the Gulf” initiative to expand virgin  
12 plastic production capacity, and has only made \$154.5 million in capital investments for its  
13 “advanced recycling” program. This \$154.5 million investment in “advanced recycling” only  
14 constitutes **0.77 percent** of the \$20 billion ExxonMobil invested in ramping up virgin plastic  
15 production.

16           289.       And since ExxonMobil’s plastic production capacity is anticipated to increase  
17 by at least 2.5 million tonnes between 2023 and 2026, to 17 million tonnes per year, the fraction  
18 of new plastic made from recycled plastic waste could be even less (0.23 percent) by the end of  
19 2026.

20           290.       Therefore, even if ExxonMobil were somehow able to resolve all the economic  
21 and technical issues with its “advanced recycling” program and reach its 500,000 tonnes/year  
22 plastic waste processing promise, the impact would be negligible, especially in light of  
23 ExxonMobil’s intent to continue expanding its virgin plastic producing capacity. The numbers  
24 alone show that ExxonMobil’s “advanced recycling” program is a public relations stunt, without  
25 any prospect of meaningfully reducing the amounts of plastic waste or virgin plastic ExxonMobil  
26 produces. Despite deceptively touting its “revolutionary” “advanced recycling” program as a  
27 solution to the plastic waste crisis, ExxonMobil continues to knowingly overwhelm the waste  
28 management system with ever increasing volumes of virgin, single-use plastics.

291. ExxonMobil appears to have first publicly stated its very small global plastic waste processing goal in October 2021, with an achievement date of the end of 2026. However, there is evidence ExxonMobil is failing to make progress toward even this minor goal. In March 2021, ExxonMobil announced a collaboration with Plastic Energy to initially process 25,000 tonnes per year of plastic waste into pyrolysis oil that would be converted to new plastic in ExxonMobil's refinery in France. The anticipated start date was 2023, but no announcement of the pyrolysis unit startup was ever made. However, on April 11, 2024, ExxonMobil announced that it was shutting down the virgin plastics production unit at the refinery. This indicates that the pyrolysis unit will not be built and operated as promised.

292. In addition, in March 2022, ExxonMobil was reportedly considering its Baton Rouge, Louisiana refinery as a site that it would invest in an "advanced recycling" unit. This claim was repeated by ExxonMobil in public statements in subsequent years, including as recently as November 2023. But in February 2024, ExxonMobil's CEO stated that the investment in the "advanced recycling" unit in the Baton Rouge refinery was uncertain.

**D. ExxonMobil's Promotion of Its ISCC PLUS Certification Is Deceptive.**

293. ExxonMobil publicly touts that its "advanced recycling" polymers are "certified" by a third party, the International Sustainability and Carbon Certification (ISCC). ISCC is a German-based entity that provides various schemes for "certifying" products as being in line with its requirements. It is an unregulated, entirely voluntary process that is promoted by the chemical and plastics industries. ISCC states that "[w]ith our certification we contribute to environmentally, socially and economically sustainable production" and "[t]hrough the utilisation of recycled materials or materials derived from biological waste, companies can accelerate the transition to a circular economy." However, the ISCC certification scheme employed by ExxonMobil is actually a false and misleading marketing scheme, which ExxonMobil uses to mislead the public into believing that products made with "certified circular polymers" have significant environmental benefits or are made of plastic waste when in fact they likely contain little to no actual "advanced recycling" content.

294. ISCC's members are predominantly from the private sector, including the

1 chemical and plastics industries. ExxonMobil is a member of the ISCC Association, and has  
 2 participated on its technical committee. Although ISCC is not new, it has only recently started  
 3 providing certifications of plastic products via the ISCC PLUS certification scheme, starting in or  
 4 about 2018-2019.

5 295. ISCC’s certification programs for materials in other sectors have been criticized  
 6 as inadequate and have even been linked to scams, including in the European biofuels industry.  
 7 “Critics say [the ISCC] relies on self-reporting from companies and lacks systematic testing of  
 8 imports into the EU—a setup one analyst described as ‘essentially an honor system.’”<sup>147</sup>

9 296. ExxonMobil obtains ISCC PLUS certificates from an Emeryville, California-  
 10 based company named Scientific Systems, Inc. dba SCS Global Services. These “certificates”  
 11 provide minimal information. For example, no information is provided on the plastic waste source  
 12 (pre- or post-consumer), process amounts, process losses, byproducts produced, or yield of plastic  
 13 waste to new plastic production that would allow consumers to understand how much plastic  
 14 waste actually becomes new plastic and whether noncircular byproducts, such as fuels which will  
 15 be combusted, are produced.

16 297. These ISCC PLUS certificates purport to represent a certain amount of plastic  
 17 polymers that have been produced from plastic waste via ExxonMobil’s “advanced recycling”  
 18 facilities. ExxonMobil self-determines the number of certificates that it can sell and then sells  
 19 these certificates at a premium price to customers, such as plastic packaging companies, that  
 20 ExxonMobil knows would like to make environmentally friendly claims to the public.  
 21 ExxonMobil has made numerous false representations to the public, including Californians, that  
 22 the products “certified” by ISCC contain a certain percentage of “certified circular polymers,”  
 23 sometimes up to 90 to 100 percent. ExxonMobil has also made numerous misleading statements  
 24 to the public, including Californians, that its ISCC PLUS certification ensures “circularity” and  
 25 other substantial environmental benefits of the products that result from “advanced recycling.”

26 298. In reality, the ISCC PLUS certification utilized by ExxonMobil allows for little

27 <sup>147</sup> Moskowitz et al., *How Biofuels Scams Have Undermined A Flagship EU Climate*  
 28 *Policy* OCCRP (July 4, 2023) <<https://www.occrp.org/en/investigations/how-biofuels-scams-have-undermined-a-flagship-eu-climate-policy>> (as of July 29, 2024).

1 to no physical traceability between its “advanced recycled” polymers to the products that  
 2 consumers are purchasing. In fact, products marketed as having ISCC PLUS “certified circular  
 3 polymers” likely contain little to no physical recycled content or environmental benefits at all.  
 4 This is because the ISCC PLUS certification that ExxonMobil uses allows “mass balance” with  
 5 “free allocation” or “free attribution.”

6 299. “Mass balance” is an accounting approach used to track the inputs and outputs  
 7 of a substance throughout a process, such as the “advanced recycling” process. In the context of  
 8 “advanced recycling,” it allows companies to account for the conversion of a mixture of virgin  
 9 plastic and waste plastic to new plastic and other products through the processing system.

10 300. “Free allocation” takes “mass balance” into the imaginary realm and divorces  
 11 the need for end products to reflect the actual amount of physical waste plastic content that the  
 12 products contain. It is an accounting exercise by which ExxonMobil can choose to allocate all of  
 13 the waste plastic it puts into the system into one of many different end products, even if no actual  
 14 waste plastic polymers end up in that product.

15 301. As some advocates have observed, “The mass balance allocation approach is  
 16 fundamentally an artificial credit scheme that allows plastics and products companies to claim  
 17 fictionally high recycled content levels in certain products through the sale of credits.”<sup>148</sup>

18 302. A simple example helps explain the complex scheme. It would be entirely  
 19 deceptive to brand a bag of coffee as “100 percent decaffeinated” when only one percent of the  
 20 beans in the bag have been decaffeinated. The same logic applies to plastic packaging. It is  
 21 deceptive and misleading for companies to claim plastic packaging is made from “100 percent  
 22 circular” or “100 percent recycled plastic” when the physical content of the packaging is only  
 23 composed of one percent recycled plastics. Additionally, it would be equally deceptive for a  
 24 company to decaffeinate coffee at one facility and sell the rights to claim coffee produced at  
 25 another operation—which hasn’t decaffeinated its coffee—is decaffeinated.<sup>149</sup> This is essentially

26  
 27 <sup>148</sup> Just Zero et al., *Modifications to the Safer Choice Standard and Potential*  
*Implementation of a Safer Choice Cleaning Service Certification Program (EPA-HQ-OPPT-*  
*2023-0520)* (Jan. 16, 2024) page 2.

28 <sup>149</sup> *Ibid.*

1 what ExxonMobil does with its “certified circular polymers” under the ISCC PLUS mass balance  
2 with free allocation scheme.

3 303. Figure H, below, demonstrates how the mass balance approach with free  
4 allocation enables a company to falsely claim that plastic waste (recycled feedstock) that is made  
5 into fuel can be counted by companies as polymer “recycled content” under the ISCC PLUS  
6 guidelines.<sup>150</sup> In the hypothetical scenario shown in Figure H, below, 10 units of plastic waste  
7 (recycled feedstock) and 90 units of virgin plastic (virgin feedstock) are put into the “advanced  
8 recycling” system steam cracker.<sup>151</sup> While the vast majority—9 out of 10 units—of the plastic  
9 waste (recycled feedstock) actually become *non*-plastic products (5 units of the 10 units of  
10 recycled feedstock become fuel and 4 units of the 10 units become other non-polymer products),  
11 only 1 of the 10 units becomes a new plastic polymer. Nevertheless, the ISCC PLUS mass  
12 balance with free allocation scheme allows the company, on paper, to “shift” the plastic waste  
13 content of the fuel and non-polymer products over to the new plastic polymer product and claim  
14 that it is made *entirely* from recycled plastic waste—even though only 1 of its 10 units (10  
15 percent) actually came from plastic waste.

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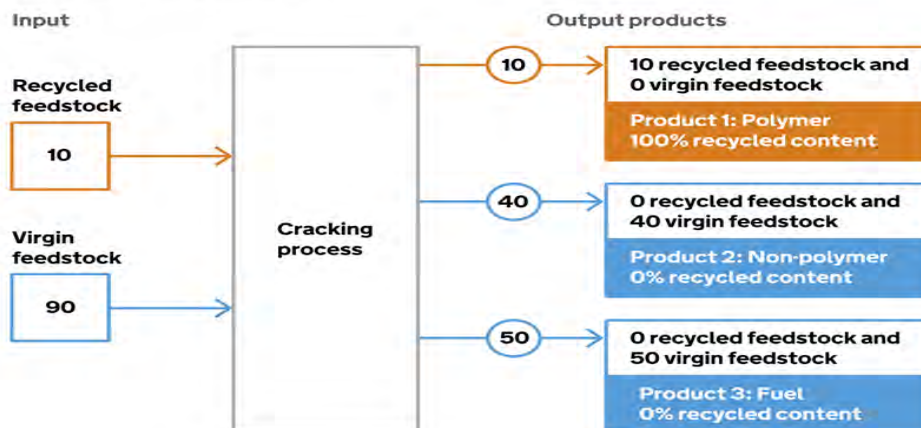
24 ///

25 \_\_\_\_\_  
26 <sup>150</sup> ISCC, ISCC System Documents <[https://www.iscc-system.org/certification/iscc-  
documents/iscc-system-documents/](https://www.iscc-system.org/certification/iscc-documents/iscc-system-documents/)> (as of July 29, 2024); ISCC, ISCC Plus (Mar. 6, 2024)  
27 <[iscc-system.org/wp-content/uploads/2024/03/ISCC-PLUS\\_v3.4.2.pdf](https://www.iscc-system.org/wp-content/uploads/2024/03/ISCC-PLUS_v3.4.2.pdf)> (as of July 29, 2024).

28 <sup>151</sup> As noted above, however, this hypothetical scenario of 10 percent recycled feedstock is actually not possible for ExxonMobil due to contamination; only a maximum of 2 percent of pyrolysis oil (recycled feedstock) can be fed to steam crackers.

Figure H: Free Allocation/Attribution Mass Balance Method<sup>152</sup>

Figure 1: Free allocation method



304. ISCC PLUS certification claims are not independently verified by any government or regulatory authority. Mass balance and free allocation have been widely criticized, including by some members of the plastics industry, precisely because it is deceptive to the public.<sup>153</sup> The U.S. Environmental Protection Agency recently rejected the use of mass balance in meeting its recycled content requirement for plastic products and packaging that seek to participate in the agency’s Safer Choice labeling program, which allows manufacturers to affix a “Safer Choice” label on certain consumer products that meet the program’s health and environmental criteria.<sup>154</sup>

<sup>152</sup> HM Revenue and Customs, *Plastic Packaging Tax – Chemical Recycling and Adoption of a Mass Balance Approach* (July 18, 2023) <<https://www.gov.uk/government/consultations/plastic-packaging-tax-chemical-recycling-and-adoption-of-a-mass-balance-approach/plastic-packaging-tax-chemical-recycling-and-adoption-of-a-mass-balance-approach#mass-balance-models/>> (as of July 29, 2024).

<sup>153</sup> U.S. Environmental Protection Agency, Draft National Strategy to Prevent Plastic Pollution, *supra*; Plastics News, *Chemical Recycling, Greenwashing Claims at Play in Mass Balance Discussions* (July 13, 2023); Morse, *Your ‘Recycled’ Grocery Bag Might Not Have Been Recycled* (Mar. 20, 2023) Undark <<https://undark.org/2023/03/20/your-recycled-grocery-bag-might-not-have-been-recycled/>> [verifying recycled content under mass balance relies on “tricky math”] (as of July 29, 2024); Beyond Plastics et al., *Chemical Recycling: A Dangerous Deception* (Oct. 2023) pages 42-44, 69-77; ECOS, *Determining Recycled Content With the ‘Mass Balance Approach’* (Feb. 10, 2021); Last Beach Cleanup et al., *Guides for the Use of Environmental Marketing Claims – Green Guides Review, Matter No. P954501 (Docket FTC-2022-0077)* (Apr. 24, 2023) pages 47-54; Just Zero et al., *Modifications to the Safer Choice Standard and Potential Implementation of a Safer Choice Cleaning Service Certification Program (EPA-HQ-OPPT-2023-0520)*, *supra*.

<sup>154</sup> Lisa Song, *Biden EPA Rejects Plastics Industry’s Fuzzy Math That Misleads Customers About Recycled Content*, ProPublica (Aug. 9, 2024), <<https://www.propublica.org/article/epa-rejects-mass-balance-plastics-recycling-safer-choice>>.

305. In a study conducted in March 2021, the Association of Plastic Recyclers (APR) found that virtually no adults know what the term “mass balance” means.<sup>155</sup> In APR’s April 24, 2023 comment letter to the Federal Trade Commission (FTC) regarding proposed updates to the FTC’s Guides for the Use of Environmental Marketing Claims (“Green Guides”)<sup>156</sup>, APR explicitly stated that “There is particular concern about the use of free allocation methods under mass balance that may overstate the amount of recycled content in a given product.”<sup>157</sup> APR went on to state that:

[The FTC] should not permit recycled claims based on methods such as ‘mass balance,’ credit trading or similar systems. Consumers purchase a product with recycled content with the implied understanding there are recycled materials in that actual product, and claims must conform to that understanding. Making recycled content claims in on-pack labeling, based on mass balance calculations, is deceptive to the consumer because there is little to no physical traceability to prove that there is *any* physical recycled content in the actual product, which is what the consumer believes to be true.<sup>158</sup>  
(Emphasis in original.)

306. Similarly, the National Institute of Standards and Technology (NIST) reported that “[a] key characteristic of MB [mass balance] model is that the physical presence of the desired characteristic in the product is low or unknown.”<sup>159</sup> NIST found that mass balance has “many unsettled issues, ill-defined terms, and conflicting objectives with regards to the application of MB [mass balance] certification to polymers.”<sup>160</sup>

307. ExxonMobil justifies its use of mass balance as necessary because it is purportedly “impossible” to track molecules that originate from plastic waste. This is false, and ExxonMobil knows it. Internal documents show that ExxonMobil uses scientific analysis and testing to track what happens to the plastic waste it co-processes and steam cracks, including the specific proportion of the plastic waste that makes it out of the process as “recycled” plastic.

<sup>155</sup> The Assn. of Plastic Recyclers, *Recycling Terms Survey* (Mar. 2021) <<https://plasticsrecycling.org/images/library/Recycling-Terms-Survey2021.pdf>> (as of July 29, 2024).

<sup>156</sup> The Green Guides are a set of guidelines to help marketers avoid making environmental claims about products that can mislead consumers.

<sup>157</sup> The Assn. of Plastic Recyclers, *Comments of the Association of Plastic Recyclers Regarding Guides for the Use of Environmental Marketing Claims* (Apr. 24, 2023) page 32.

<sup>158</sup> *Id.* at page 2 (emphasis in original).

<sup>159</sup> Nat. Inst. of Stds. and Technology, U.S. Dept. of Commerce, *An Assessment of Mass Balance Accounting Methods for Polymers Workshop Report* (Feb. 2022) page 7.

<sup>160</sup> *Id.* at page v.

308. Under the false cloak of legitimacy of being “ISCC PLUS certified,” ExxonMobil has knowingly deceived the public into believing that its “advanced recycling” operations have significant environmental benefits, creating products that are “circular” and “recycled.” ExxonMobil has a massive financial interest in ensuring that mass balance free allocation methods are accepted broadly and even enshrined in law. Indeed, continuing the public deception is ExxonMobil’s business model.

**E. ExxonMobil Knows That Its “Advanced Recycling” Program Is Not Economically Viable.**

309. Despite the technical limitations of “advanced recycling,” ExxonMobil continues its campaign of deception about the economic viability and commercial scalability of its “advanced recycling” operations. In its 2022 annual report, ExxonMobil boasts that, “We are uniquely positioned with our scale, integration, and technology to expand advanced recycling capacity to help broaden the range of plastics that society recycles.” In a social media post, ExxonMobil claims that its “advanced recycling” technology is “commercial and scalable” and that the corporation is attempting to “scale the technology around the world.”<sup>161</sup> ExxonMobil further states that it is creating “opportunities to capture value from plastic waste at scale.”<sup>162</sup> These representations about the economic viability of “advanced recycling” have been a part of ExxonMobil’s strategy since even before its first “advanced recycling” facility at Baytown began operation in December 2022: a 2020 internal ExxonMobil presentation advised executives to “[p]romote advanced recycling as scalable, GHG-advantaged solution to help address plastic waste.”

310. ExxonMobil also touts the commercial value of both plastic waste and its recycled plastics. It characterizes discarded plastics as having “enormous benefits” and being “too

<sup>161</sup> ExxonMobil Chemical, Twitter (Aug. 29, 2023) <[https://twitter.com/XOM\\_Chemical/status/1696540786190401804](https://twitter.com/XOM_Chemical/status/1696540786190401804)> (as of July 31, 2024); see also *ExxonMobil, Advanced Recycling Technology Supports the Circular Economy for Plastic Around the World* [https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/exxtend-goes-global?utm\\_source=twitter&utm\\_medium=social&utm\\_campaign=chemical\\_exxtend&utm\\_content=argoesglobal\\_aug29](https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/exxtend-goes-global?utm_source=twitter&utm_medium=social&utm_campaign=chemical_exxtend&utm_content=argoesglobal_aug29) (as of July 29, 2024).

<sup>162</sup> ExxonMobil, X (formerly Twitter) (Mar. 31, 2021) <<https://x.com/exxonmobil/status/1377352081976094720>> (as of July 31, 2024).

1 valuable to waste.” ExxonMobil emphasizes that it needs “more plastic to feed into our Baytown  
2 facility,” that it wants the plastic waste “out of the landfill” and “into the blue bins so that it’s  
3 sorted,” and it would “love to take it” into its facility. It further claims that recycled plastics are  
4 “new valuable products needed for modern life.”<sup>163</sup>

5 311. In reality, “advanced recycling” has never been economically viable for a host  
6 of reasons. First, the process of collecting, sorting, transporting, and reprocessing plastic waste is  
7 immensely expensive. Increases in diesel prices make the cost of trucking plastic waste even  
8 greater. In fact, the uncertainty in feedstock costs has led ExxonMobil to be “very cautious” in its  
9 capital expenditures for “advanced recycling” projects.

10 312. Second, in order to produce recycled plastics, “advanced recycling” requires  
11 “very pure,” uniform, and high-quality feedstock. ExxonMobil itself has recognized that “[a]ccess  
12 to quality feed” is “key” to the “scale up of Advanced Recycling,” and that “[r]oadblocks to  
13 advanced recycling include the “[s]peed of supply chain development [and] plastic waste  
14 quality.” The use of a very heterogeneous feedstock creates a challenging obstacle, as even “small  
15 amounts of problematic substances ... can lead to the failure of a whole process approach.”<sup>164</sup>  
16 However, homogenous feedstock is difficult and expensive to obtain on a commercial scale. In  
17 fact, FCC Environmental Services, a waste management and recycling company, expressed  
18 strong concerns with promoting competition between mechanical and chemical recycling  
19 facilities for feedstock, and with diversion of plastics from mechanical recycling to “advanced  
20 recycling.” In October 2023, FCC Environmental Services turned down ExxonMobil’s proposal  
21 for FCC to clean and sort plastic film waste for feedstock because ExxonMobil’s feedstock  
22 specifications for their “advanced recycling” process were stricter than those for mechanical  
23 recycling, the proposed price did “not make economical sense” to FCC, and FCC thought there  
24 was a “very uncertain return scenario” compared to the market for mechanical recycling.

25 313. Third, the production of higher quality virgin plastic is cheaper. New high

26 <sup>163</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at  
27 page 4 (citing ExxonMobil Facebook post (Sept. 6, 2023) <<https://www.facebook.com/ads/library/?id=623208426597156>> [as of July 29, 2024]).

28 <sup>164</sup> Quicker et al., *Chemical Recycling: A Critical Assessment of Potential Process Approaches*, (Mar. 15, 2022) 40 *Waste Management and Research* 10 pages 1501-1502.

quality virgin plastics use less costly virgin hydrocarbon feedstock, and require much less time, labor, truck transport, processing, and equipment than that needed to produce lower quality recycled plastic. One study found that resins recovered through plastic-to-plastic “advanced recycling” are 1.6 times more expensive than virgin resins.<sup>165</sup> Petrochemical companies therefore have financial incentives to continue making and selling low-cost virgin plastic. And that is what these companies, including ExxonMobil, continue to do and to invest in.

314. Fourth, ExxonMobil and other petrochemical companies’ unceasing production of hundreds of billions of dollars of cheap, virgin plastic resins every year—amounting to 460 million tonnes of cheap new plastic production annually in 2019<sup>166</sup>—floods the market and makes higher-cost recycled plastic uncompetitive.

315. The economic problems with recycling plastics are well-known and widespread throughout the petrochemical industry, and are not significantly different for mechanical versus “advanced” recycling. As one industry insider wrote 50 years ago, “[t]here is serious doubt that [recycling plastic] can ever be made viable on an economic basis.”<sup>167</sup> Another explained that “chemical recycling” “require[s] greater energy inputs than it save[s]” and is therefore an “energy-loser.”<sup>168</sup> Larry Thomas, former president of the Society of the Plastics Industry, observed that the petrochemical industry has no economic incentive to produce recycled plastics when their business is producing “as much oil as you possibly can” and selling virgin material.<sup>169</sup>

316. ExxonMobil has known for at least 30 years that “advanced recycling” could never be economically feasible, and, therefore, would not be scaled up. In a 1994 meeting with

<sup>165</sup> *Id.* (citing Yadav et al., *Techno-Economic Analysis and Life Cycle Assessment for Catalytic Fast Pyrolysis of Mixed Plastic Waste* (June 5, 2023) 16 Energy & Environmental Science 9).

<sup>166</sup> OECD, *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options* (Feb. 22, 2022).

<sup>167</sup> Sullivan, *How Big Oil Misled the Public Into Believing Plastic Would Be Recycled*, NPR (Sept. 11, 2020) <<https://www.npr.org/2020/09/11/897692090/how-big-oil-misled-the-public-into-believing-plastic-would-be-recycled>> (as of July 29, 2024).

<sup>168</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at pages 25-26 (citing Griff, *Is Recycling Good for the Environment?* 4 (2003) <<https://griffex.com/wp-content/uploads/2020/09/Griff-gpec-and-tables.pdf?c772ab&c772ab>> (as of July 29, 2024).

<sup>169</sup> Sullivan, *How Big Oil Misled the Public Into Believing Plastic Would Be Recycled*, *supra*.

1 APC staffers, Exxon Chemical Vice President Irwin Levowitz called pyrolysis a “fundamentally  
2 uneconomical process.”<sup>170</sup> This remains true today.

3 317. Indeed, the economic pitfalls of “advanced recycling” are reflected not only in  
4 speeches, studies, and white papers, but also in the consistent failure of “advanced recycling”  
5 facilities to demonstrate viability over the past decades. No chemical recycling project in the last  
6 20 years has successfully recycled plastic at a commercial scale.<sup>171</sup> This is not due to any lack of  
7 public investment or corporate resources to invest in these projects, if they desire. In fact, since  
8 2017, at least \$500 million in public funds have been spent on 51 U.S. “advanced recycling”  
9 projects.<sup>172</sup> And U.S. residents pay approximately \$4.2 to \$5.9 billion each year, mostly in local  
10 taxes, for the collection of recycling materials from curbside bins.

11 318. These investments in “advanced recycling” ultimately did not move the needle  
12 to establish “advanced recycling” as economically viable. Internal documents from 2020 show  
13 that ExxonMobil’s target rate of return on co-processing of plastic waste in a coker would depend  
14 largely on the price of plastic waste feedstock and would not be at all profitable above a certain  
15 price point. But this price point for plastic waste feedstock was not realistic or possible: in 2021,  
16 ExxonMobil was informed that “all-in delivered costs of post-consumer post-use plastics to  
17 Baytown facility” would average a significantly higher price per pound even if ExxonMobil  
18 invested in a sorting facility. Thus, ExxonMobil is struggling to find affordable, suitable plastic  
19 waste feedstock in sufficient amounts to use as feed in its cokers.

20 319. The lack of profitability from “advanced recycling” plastic waste led  
21 ExxonMobil to develop a business model based on the sales of circular credits at a premium over  
22 the cost of virgin plastic. But 2021 internal documents show that “advanced recycling” projects  
23 would not meet ExxonMobil’s profitability requirements unless a substantial “Circular Premium”  
24 was charged on the “advanced recycling” product above the cost of virgin plastic produced. In

25 \_\_\_\_\_  
26 <sup>170</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at  
page 26 (citing Condrey, *ART Meeting-Houston*, at 27 (Jan. 26, 1994)).

27 <sup>171</sup> Brock et al., *The Recycling Myth: Big Oil’s Solution for Plastic Waste Littered with*  
*Failure*, A Reuters Special Report (July 29, 2021) <[https://www.reuters.com/investigates/special-](https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/)  
28 [report/environment-plastic-oil-recycling/](https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/)> (as of July 29, 2024).

<sup>172</sup> *Ibid.*

1 other words, customers would have to pay significantly more for the “advanced recycling”  
 2 product than for virgin plastic. One way to charge customers for the “Circular Premium” would  
 3 be to offer customers a “Circular Certificate” provided by ISCC.<sup>173</sup> But ExxonMobil’s internal  
 4 documents reflect that even if customers were willing to pay a substantial “Circular Premium” to  
 5 purchase a “Circular Certificate,” ExxonMobil still had to limit plastic feedstock costs to a  
 6 specific “breakeven” price range to meet corporate profitability requirements. ExxonMobil is  
 7 paying multiples of that range for delivery of plastic feedstock.

8 320. Moreover, ExxonMobil has failed to meet its own internal schedules for starting  
 9 up and making final investment decisions for a number of potential “advanced recycling”  
 10 installations. ExxonMobil considers its Baytown facility as small scale, and has so far refrained  
 11 from “plac[ing] bets on” large or full-scale “advanced recycling” projects, despite ExxonMobil’s  
 12 claims that such projects are economically viable and scalable. In fact, in September 2022,  
 13 ExxonMobil discussed a delay, or “decompression” of its “advanced recycling” project schedule.  
 14 ExxonMobil’s Baytown project is operating at a loss of many millions of dollars per year.  
 15 Overall, ExxonMobil projected that its “advanced recycling” projects would operate at a nine-  
 16 figure net cash loss in 2023, and that its only path to future profitability was to secure steady,  
 17 low-cost plastic waste feed suitable for its flexicoker unit and to sell thousands of Circular  
 18 Certificates at a high premium over virgin plastic.

19 321. ExxonMobil well knows that “advanced recycling” will not be scaled up  
 20 without profitability, yet ExxonMobil continues to represent to the public that “advanced  
 21 recycling” is a realistic solution to the plastic waste and pollution crisis. In October 2023,  
 22 ExxonMobil asserted that growing demand for recycled plastic was driving investment, and that  
 23 the company’s “advanced recycling” operation was a “proven technology that is scalable.” A  
 24 month later, ExxonMobil boasted that it was “looking at potential new [advanced recycling]  
 25 facilities at other sites in the United States, as well as in Canada, Belgium, the Netherlands and  
 26 Singapore. All told, we expect to have the capacity to process a billion pounds [500,000 tonnes]

27 \_\_\_\_\_  
 28 <sup>173</sup> As discussed in Subsection D, above, these certificates are in and of themselves  
 deceptive.

per year around the world by the end of 2026.” ExxonMobil’s 2026 goal depends on the success of its Baytown “advanced recycling” operations, which ExxonMobil advertises as having the capacity to co-process 40,000 tonnes of plastic waste per year. However, ExxonMobil has struggled to achieve this 40,000 tonnes per year capacity because of technical limitations of co-processing plastic waste in cokers, and has deliberately limited the amount of plastic waste it feeds its cokers to far less than its claimed 40,000 tonnes per year capacity. Consequently, because ExxonMobil is co-processing less plastic waste, it is not producing the anticipated amount of “Circular Certificates” to make its “advanced recycling” program profitable.

322. Thus, despite ExxonMobil’s public claims, the company has failed to: (1) produce and sell the planned amount of “Circular Certificates”; and (2) obtain suitable homogenous plastic feedstock within its “breakeven” price range, both of which are required to achieve the profit level that the company requires.

323. In an attempt to address plastic feedstock cost, in February 2021, ExxonMobil and a “chemical recycling” company, Agilyx Corporation (Agilyx), announced a joint venture establishing Cyclyx International LLC (Cyclyx). Cyclyx was established to aggregate and pre-process plastic waste for “advanced recycling” projects. ExxonMobil owns 25 percent of Cyclyx, LyondellBassell owns 25 percent, and Agilyx owns 50 percent. As part of the joint venture, Cyclyx would supply ExxonMobil with plastic waste feedstock. Cyclyx, which calls itself a “[f]or profit corporation acting like a non-profit collaborative for the benefit of its members,” advertises its “mission” as to “help increase the plastics recycling rate from 10 to 90% by getting the right feed to the right technology.”<sup>174</sup> This goal, however, is not achievable in light of the technical and economic limitations that have persisted for decades.

324. According to ExxonMobil, a Cyclyx Circularity Center would be built to produce feedstock for both mechanical and “advanced” recycling, and would “leverage new technologies to analyze plastics based on their composition and sort them according to customer

<sup>174</sup> BIC Magazine, *Cyclyx, ExxonMobil and LyondellBasell Jointly Pursue Plastic Processing Facility in Houston* (Oct. 19, 2022) <<https://www.bicmagazine.com/projects-expansions/renewable-sustainability-h2-esg/cyclyx-exxonmobil-and-lyondellbasell-jointly-pursue-plastic/>> (as of July 29, 2024).

1 specifications for their highest and best reuse.” In an April 27, 2023 press release, ExxonMobil,  
 2 Cyclyx, and other partners announced their “intention to be the first in the United States to  
 3 successfully launch a circular food packing proof of concept leveraging advanced recycling.”  
 4 ExxonMobil touted a “successful demo” where “plastic waste was collected from grocery stores,  
 5 diverting it from landfills.” According to ExxonMobil, this “demo” showed that “creating a  
 6 circular economy is achievable with value chain collaboration” and that “the process is now being  
 7 evaluated for scale.”

8 325. ExxonMobil and its partners, which now include another petrochemical  
 9 company, LyondellBasell Industries, announced an expected start-up date for the Cyclyx  
 10 Circularity Center in 2024, with an investment of approximately \$100 million contingent on a  
 11 final investment decision in early 2023.

12 326. Internally, however, ExxonMobil questioned Cyclyx’s viability. It described  
 13 Cyclyx as “loss making” and asked, “what is the plan to make it break even.” These doubts are  
 14 compounded by Cyclyx’s 2021 report to ExxonMobil, stating that even if ExxonMobil invested  
 15 in a Cyclyx sorting facility, plastic waste feedstock would cost ExxonMobil an average amount  
 16 well above the “breakeven” cost. ExxonMobil did not make a final investment decision on  
 17 funding the Cyclyx Circularity Center until December 2023, after FCC Environmental Services  
 18 rejected ExxonMobil’s proposal.<sup>175</sup> According to ExxonMobil, the center will now have an  
 19 expected start-up date of mid-2025.

20 327. Despite ExxonMobil’s internal misgivings, Cyclyx’s own statements that  
 21 plastic waste feedstock is not consistently available, and the lengthy delay in funding the Cyclyx  
 22 Circularity Center, ExxonMobil misleadingly claims that the circularity center “will accept,  
 23 analyze and process a range of plastic, including difficult-to-recycle materials, such as food  
 24 packaging, chip bags and bottle caps.” However, ExxonMobil knows that it is not possible, either  
 25 technically or economically, to recycle these materials at a rate even remotely approaching 90  
 26 percent, as Cyclyx identifies as its mission. Additionally, an internal document shows that

27 <sup>175</sup> Kazdin, *Cyclyx Announces Final Investment Decision for Circularity Center*,  
 28 Recycling Today (Dec. 7, 2023) <<https://www.recyclingtoday.com/news/cyclyx-final-investment-decision-circularity-center/>> (as of July 29, 2024).

1 ExxonMobil did not expect to meet its advertised goal of processing 500,000 tonnes, or one  
2 billion pounds, of plastic waste by 2026. Instead, it planned to process only a fraction of its stated  
3 goal by the end of 2026 and did not even expect to meet its 2026 goal by 2028. Yet  
4 ExxonMobil’s website still advertises its abandoned goal to “ramp up” its “advanced recycling”  
5 “processing capabilities to 500 kTa [0.5 million tonnes], or one billion pounds, of waste plastic by  
6 year-end 2026.”

7 328. ExxonMobil also deceives the public about the economic viability of obtaining  
8 feedstock for “advanced recycling” through its involvement in the Houston Recycling  
9 Collaboration. In January 2022, the Houston Recycling Collaboration was formed by  
10 ExxonMobil, the City of Houston, LyondellBasell, Cyclyx International, and FCC Environmental  
11 Services through a memorandum of understanding. The claimed goal of the collaboration is to  
12 “Collect **all** plastic—no matter the type—from water bottles and bubble wrap to dry cleaner bags  
13 and takeout containers” and drop off the collected plastics at “recycling takeback locations to be  
14 implemented across the city.” The plastics would be collected at facilities including the  
15 Kingwood Neighborhood Recycling Center, which would then supposedly provide feedstock to  
16 ExxonMobil’s Baytown “advanced recycling” plant. In public videos on platforms reachable by  
17 Californians, ExxonMobil representatives said the Baytown “advanced recycling” facility needed  
18 plastic feedstock and that Kingwood residents can drop their plastics off at the Kingwood  
19 collection site, to be transported and recycled at the ExxonMobil Baytown facility. The local  
20 television news segment that aired in Houston told residents that plastic waste collected at the  
21 Kingwood collection site would be recycled at ExxonMobil’s Baytown facility.

22 329. However, in June through September 2023, an environmental group attached  
23 tracking devices to 11 plastic items that they dropped into the collection bins at Kingwood  
24 Neighborhood Recycling Center and the North Main Neighborhood Recycling Center. At their  
25 final location, all 11 devices led to an open-air waste management site, where all 11 plastic items  
26 had been tossed alongside a fence along with other plastic waste—not to Baytown or any other  
27  
28

1 recycling facility.<sup>176</sup> In response to this report, ExxonMobil repeated its deceptive claim that  
 2 “[a]dvanced recycling is a proven technology” that can help “address the challenge of plastic  
 3 waste” and that ExxonMobil was working “to help increase the amount of plastics that enter the  
 4 [‘advanced recycling’] supply chain.”<sup>177</sup>

5 330. Again, ExxonMobil relies on the same public deception playbook: boasting  
 6 about the technical and economic viability of “advanced recycling,” announcing steps towards  
 7 establishing recycling ventures, then ultimately failing to recycle any substantial percentage of the  
 8 plastic waste generated by ExxonMobil itself, let alone the plastics industry. However, there is no  
 9 pathway through which “advanced recycling” can become technically or economically viable.

10 331. Instead, ExxonMobil tries to generate sufficient income through its “advanced  
 11 recycling” projects by selling false and deceptive recycling certifications, as described above.

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26 <sup>176</sup> Bruggers, *Dumped, Not Recycled? Electronic Tracking Raises Questions About*  
 27 *Houston’s Drive to Repurpose a Full Range of Plastics*, Inside Climate News (Nov. 1, 2023)  
 28 <<https://insideclimatenews.org/news/01112023/electronic-tracking-questions-houstons-drive-to-repurpose-plastics/>> (as of July 29, 2024).

<sup>177</sup> *Ibid.*

**F. ExxonMobil Targets Its Deceptive “Advanced Recycling” Messages to California Consumers, Businesses, and Law and Policy Makers.**

332. ExxonMobil spreads its deceptive “advanced recycling” messages broadly and aggressively on multiple social media platforms, including but not limited to LinkedIn, Twitter, Facebook, Instagram, and YouTube. On Twitter (now called “X”), ExxonMobil made false claims about its technical ability to process post-consumer plastics, despite internally understanding that post-consumer plastics are too contaminated to co-process in significant volumes. For example, on November 24, 2021, ExxonMobil tweeted<sup>178</sup>:



<sup>178</sup> ExxonMobil, X (formerly Twitter) (Nov. 24, 2021) <<https://x.com/exxonmobil/status/1463596818521112590?s=20>> (as of July 29, 2024).

333. On November 15, 2022, ExxonMobil tweeted<sup>179</sup>:



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<sup>179</sup> ExxonMobil, X (formerly Twitter) (Nov. 15, 2022) <https://x.com/exxonmobil/status/1592606620231421952?s=20> (as of July 29, 2024).

334. On March 1, 2023, ExxonMobil tweeted<sup>180</sup>:



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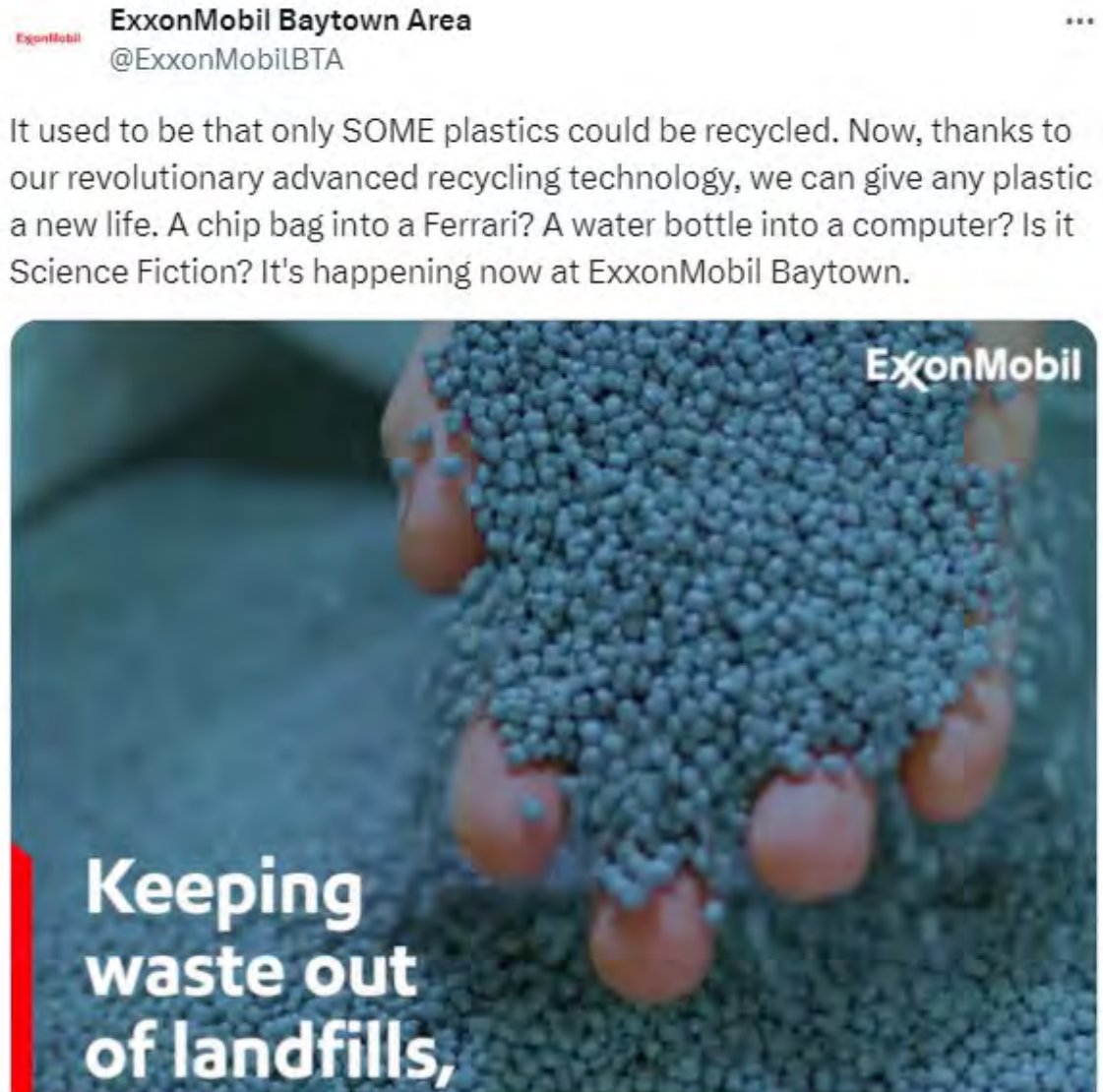
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<sup>180</sup> ExxonMobil, X (formerly Twitter) (Mar. 1, 2023)

<<https://twitter.com/exxonmobil/status/1630964258535030789>> (as of July 29, 2024).

335. On August 28, 2023, ExxonMobil Baytown Area tweeted<sup>181</sup>:



336. Similarly, though not pictured:

- On March 7, 2022, ExxonMobil tweeted false claims about its “advanced recycling” program’s ability to “recycle” a plastic product “over multiple recycling loops,” despite knowing the fact that most, if not all, of the plastic is destroyed or turned into fuel and other non-circular products in the process.<sup>182</sup>

<sup>181</sup>ExxonMobil Baytown Area, X (formerly Twitter) (Aug. 28, 2023) <<https://x.com/exxonmobilbta/status/1696261899652931725?s=46&t=OBruA2TmyQn2AZvSTYmlOQ>> (as of July 29, 2024).

<sup>182</sup>ExxonMobil Chemical, X (formerly Twitter) (Mar. 7, 2022) <[https://twitter.com/XOM\\_Chemical/status/1500876771310379013/](https://twitter.com/XOM_Chemical/status/1500876771310379013/)> (as of July 29, 2024).

- On August 29, 2023, ExxonMobil Chemical tweeted misleading claims that “advanced recycling” is “commercial and scalable,” and that “it is pursuing ambitions to scale this technology around the world.”<sup>183</sup>
- On October 5, 2022, ExxonMobil pushed claims that its “advanced recycling” technology—i.e., co-processing plastic waste in cokers—was a new technology, despite Mobil having patented the technology in the 1970s.<sup>184</sup>

337. On YouTube, ExxonMobil posts numerous deceptive videos expounding the environmental virtues of “advanced recycling.” For example, one video dated May 2, 2023, clearly implies that all the plastic waste being brought to the Baytown facility comes out as new plastic.<sup>185</sup> The video also deceptively claims that the “advanced recycling” process decreases the amount of GHG emissions by 19 to 49 percent compared to virgin plastic.<sup>186</sup>

338. ExxonMobil sponsored another YouTube video dated May 1, 2023, featuring its partnership with Cyclyx, Sealed Air, and Ahold Delhaize USA, which makes clear that consumers consider the reusability and recyclability of packaging when making purchases.<sup>187</sup> It then leads consumers to believe that the plastic waste being “recycled” is going directly into the containers they buy at grocery stores.<sup>188</sup> In another video dated February 16, 2024, titled “Recycling is Real,” with partners Cyclyx and TenCate, an ExxonMobil representative states, “Advanced recycling is key to taking recycling rates to the next level.”<sup>189</sup>

339. ExxonMobil targets Californians with deceptive digital advertisements regarding “advanced recycling.” For example, ExxonMobil has paid for Facebook advertisements to Californians falsely claiming that, for “advanced recycling,” “every ton of

<sup>183</sup> ExxonMobil, X (formerly Twitter) (Aug. 29, 2023) <[https://twitter.com/XOM\\_Chemical/status/1696540786190401804/](https://twitter.com/XOM_Chemical/status/1696540786190401804/)> (as of July 29, 2024).

<sup>184</sup> ExxonMobil, X (formerly Twitter) (Oct. 5, 2022) <<https://twitter.com/exxonmobil/status/1577705288643256321>> (as of July 29, 2024).

<sup>185</sup> ExxonMobil Chemical, *ExxonMobil's Exxtend Technology for Advanced Recycling Virtual Tour* (May 2, 2023) YouTube <[https://www.youtube.com/watch?v=pFaJr\\_4zi3Y/](https://www.youtube.com/watch?v=pFaJr_4zi3Y/)> (as of July 29, 2024).

<sup>186</sup> *Ibid.*; see paragraph 273-79, above.

<sup>187</sup> ExxonMobil Chemical, *News Release: Cyclyx, Sealed Air, and Ahold Delhaize USA Demo Advanced Recycling for Plastic Waste*, *supra*.

<sup>188</sup> *Ibid.*

<sup>189</sup> Plastics Industry Assn., *Recycling Is Real: ExxonMobil, Cyclyx, TenCate* (Feb. 16, 2024) YouTube <<https://www.youtube.com/watch?v=W7H6OkpO3Z4/>> (as of July 29, 2024).

1 plastic waste we process, society reduces the need to process approximately one ton of fossil fuel  
2 derived feedstocks.”<sup>190</sup>

3 340. Internal ExxonMobil documents show that it targets specific media markets  
4 including California to push deceptive “advanced recycling” messages as a way to “increase  
5 education on what advanced recycling is and how [ExxonMobil] is leading the way.”

6 341. ExxonMobil targets California businesses and businesses that otherwise do  
7 business in California with its deceptive “advanced recycling” messaging at trade shows and  
8 other events.<sup>191</sup>

9 342. ExxonMobil directs its “advanced recycling” messages to California to  
10 influence legislation in order to further its deceptive marketing. For example, ExxonMobil paid  
11 millions to the American Chemistry Council to fight a restrictive ballot measure that would have  
12 established an extended producer responsibility program for plastic products in California.

13 **G. ExxonMobil Directs and Colludes with Trade Groups to Amplify Its**  
14 **Deceptive “Advanced Recycling” Messages.**

15 343. As stated above, ExxonMobil is a member of the American Chemistry Council  
16 (ACC), the foremost trade group for the plastics industry. According to ExxonMobil’s public  
17 lobbying reports, ExxonMobil spent tens of millions of dollars on various trade groups and  
18 grassroots lobbying. ExxonMobil used these trade groups to advance its deceptive messaging  
19 around “advanced recycling,” in an effort to mislead the public. Internal documents reveal that a  
20 critical component of ExxonMobil’s “advanced recycling” program is to amplify its deceptive  
21 messaging through trade groups. Additional internal documents show close coordination with key  
22 trade groups such as the American Chemistry Council to spread deceptive “advanced recycling”  
23 messages.

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25 <sup>190</sup> See Facebook Digital Ad Library, search “ExxonMobil,” Library ID  
811271790836528 (as of May 29, 2024).

26 <sup>191</sup> See, e.g., Spielman, *MD&M West 2024: Record-Setting Rainfall Didn’t Keep*  
27 *Attendees Away from the Monday MiniTec Track*, Machine Design (Feb. 6, 2024) [ExxonMobil  
gave presentation at California medical device conference on the benefits of “advanced  
28 recycling”]; Printpack, *ExxonMobil, Pacific Coast Producers Bring Circularity to Fruit Cups*,  
*supra* [ExxonMobil makes deal for “certified circular polymers” with California-based Pacific  
Coast Producers].

344. Trade groups have widely spread deceptive “advanced recycling” messages. One of these groups is called America’s Plastic Makers. America’s Plastic Makers is a campaign of the ACC’s Plastics Division, which is made up of ExxonMobil and other businesses in the plastics industry. America’s Plastic Makers is behind a concerted effort promoting “advanced recycling” as a “new” solution to the plastic waste and pollution crisis.

345. The ACC’s digital advertising on “advanced recycling” continues to accelerate. The ACC spent \$97,000 in 2021, \$265,000 in 2022, and \$526,000 in the first few months of 2023 on Facebook and Instagram ads that falsely promoted “advanced recycling” as part of a “circular economy” for plastics. The ACC often advertises by paying for the advertisements that Americas Plastic Makers runs on online platforms such as Facebook.

346. And Californians are often among the targets for these ads.<sup>192</sup> For example, America’s Plastic Makers ran an ad campaign “Paid for by The American Chemistry Council” from February 21-22, 2023 with 50,000 to 60,000 thousand impressions, 16 percent of which were in California. The ad proclaims that “ExxonMobil is turning used plastic into new plastic at its facility in Texas. Follow a chip bag as it goes through one of the largest Advanced Recycling facilities in North America: <https://www.youtube.com/watch?v=QTh5ST38fLY>.”<sup>193</sup> That linked YouTube video misrepresents that “advanced recycling” converts plastic waste molecules to become “new plastics,” attempting to deceive Californians into believing that an old chip bag will become new plastic.<sup>194</sup>

347. ExxonMobil is a key funder of America’s Plastic Makers, just as it was a key funder of the deceptive Council for Solid Waste Solutions in the 1980s and 1990s. Internal documents show that from 2020 to 2023, ExxonMobil gave the ACC \$19.4 million to run the

<sup>192</sup> See Facebook Digital Ad Library Report, Spending Tracker (search for “America’s Plastic Makers”) <<https://www.facebook.com/ads/library/report/?source=nav-header>> (as of May 29, 2024, America’s Plastic Makers had spent \$76,592 on advertisements in California in the past 90 days (Feb. 27, 2024 to May 26, 2024)).

<sup>193</sup> See Facebook Digital Ad Library, Library ID 488499916638064 <[https://www.facebook.com/ads/library/?active\\_status=all&ad\\_type=all&country=US&view\\_all\\_page\\_id=106244251043808&search\\_type=page&media\\_type=all](https://www.facebook.com/ads/library/?active_status=all&ad_type=all&country=US&view_all_page_id=106244251043808&search_type=page&media_type=all)> (as of July 29, 2024).

<sup>194</sup> KPRC 2, *Efforts of Advanced Recycling*, *supra*.

1 “American Plastic Makers campaign [and] national policy advocacy.”<sup>195</sup> Since 2023, America’s  
 2 Plastic Makers spent \$30 million on an ad campaign promoting deceptions about “advanced  
 3 recycling.”<sup>196</sup>

4 348. One particular ad has been far-reaching and has been broadcast on major  
 5 television networks and on YouTube, including in California. There are at least two versions of  
 6 this ad, one that is 30 seconds long, and the other 15 seconds long. The 30-second ad states,  
 7 “Imagine a future where plastic is not wasted but instead remade over and over into the things  
 8 that keep our food fresher, our families safer, and our planet cleaner. To help us get there,  
 9 America’s Plastic Makers are investing billions of dollars to create innovative products and new  
 10 recycling technologies for sustainable change. Because when you push for smarter solutions, big  
 11 things can happen.”<sup>197</sup> As of July 25, 2024, the 30-second ad has been viewed 8.6 million times  
 12 on YouTube.

13 349. The 15-second ad similarly states, “For a cleaner, more sustainable future,  
 14 America’s Plastic Makers are investing billions of dollars to create innovate products and new  
 15 recycling technologies. Because when you push for smarter solutions, big things can happen.” As  
 16 of July 25, 2024, the 15-second ad has been viewed almost 35 million times on YouTube.

17 350. Contrary to the ad’s misleading claims, plastic cannot be “remade over and  
 18 over,” especially not through ExxonMobil’s “advanced recycling” technology. As noted above,  
 19 ExxonMobil’s “advanced recycling” technology is not “new” and destroys most of the plastic  
 20 waste it co-processes. Like the ad campaign by the Council for Solid Waste Solution that placed  
 21 deceptive ads in newspapers and magazines in the 1980s, this modern-day ad campaign by  
 22 America’s Plastic Makers, with ExxonMobil at the helm, deceptively seeks to convince  
 23 consumers that recycling, especially “advanced recycling,” will save the day in order to continue

24 <sup>195</sup> ExxonMobil also gave the American Chemistry Council an additional \$4 million in  
 25 2022 for the following “deliverable”: “Targeted campaign for CA ballot initiative.” This was  
 likely referring to the 2022 grassroots ballot initiative in California that sought to create a plastics  
 extended producer responsibility program in the state.

26 <sup>196</sup> Samuelson, *The Plastic Industry’s \$30 Million Lie*, HEATED (July 25, 2024)  
 27 <[https://heated.world/p/the-plastic-industrys-30-million?utm\\_campaign=email-half-  
 post&r=27dq5&utm\\_source=substack&utm\\_medium=email](https://heated.world/p/the-plastic-industrys-30-million?utm_campaign=email-half-post&r=27dq5&utm_source=substack&utm_medium=email)> (as of July 29, 2024).

28 <sup>197</sup> America’s Plastic Makers, *Dominoes (30s)* (Feb. 22, 2024) YouTube  
 <<https://www.youtube.com/watch?v=rewRKYIRew4&t=30s>> (as of July 29, 2024).

1 saturating the public and the planet with single-use plastic.

2 **IV. EXXONMOBIL'S DECEPTIONS ABOUT PLASTIC RECYCLING CAUSED AND ARE**  
 3 **CAUSING FORESEEABLE HARM TO CALIFORNIA'S NATURAL RESOURCES,**  
 4 **ECONOMY, AND RECREATION, AND ARE RESULTING IN ENVIRONMENTAL**  
 5 **INJUSTICE.**

6 351. ExxonMobil, independently and through its agents, servants, alter-egos and  
 7 industry groups, has misled consumers, policymakers, and regulators about the viability of plastic  
 8 recycling as a solution for plastic waste for more than 50 years. Since the early 1970s, as alleged  
 9 above, ExxonMobil has publicly promoted the lie that recycling would be the solution to the  
 10 plastic waste problem created by its products, while knowing that it would not. At the same time,  
 11 ExxonMobil has expanded its plastic production, which has foreseeably led to a plastic waste and  
 12 pollution crisis across California.

13 352. ExxonMobil marketed plastics and recycling in a manner that directly and  
 14 foreseeably impacted and continues to impact California, with knowledge that the intended use of  
 15 its products harmed and will continue to harm California and elsewhere. ExxonMobil  
 16 purposefully directed its misleading conduct to reach the State, its businesses, and its residents, to  
 17 promote the continued and unabated use of plastics products, including ExxonMobil's plastics  
 18 products, in California and elsewhere. These deceptions have resulted in significant injuries in the  
 19 State while increasing sales to ExxonMobil.

20 353. Over the years, ExxonMobil expanded its U.S. plastic production to 7.7 million  
 21 tonnes per year in 2023. Plastic waste has also grown, for instance, from 8.9 percent of all  
 22 managed trash in California in 1999 to almost 14 percent of all managed trash in California in  
 23 2021. Yet, throughout the half century during which ExxonMobil promised that recycling would  
 24 provide the solution to the increasing amount of plastic waste generated by its ever increasing  
 25 plastic production, the rate of plastic recycling in the United States has never exceeded nine  
 26 percent (and only reached nine percent due to millions of pounds of plastic waste exported each  
 27 year under the guise of recycling), and currently hovers at around five percent.<sup>198</sup>

28 <sup>198</sup> Nat. Renewable Energy Laboratory, *NREL Calculates Lost Value of Landfilled Plastic in U.S., supra*; see also Beyond Plastics, *The Real Truth About the U.S. Plastics Recycling Rate, supra*, at page 2.

354. Meanwhile, the public became alarmed by the increasing amount of plastic trash that had begun choking California rivers and shores. In response to Californians' desperation to do something about plastic waste destroying the environment, California Coastal Cleanup Day was born. Volunteers concerned with the devastating effects of plastic pollution on California beaches, waterways, and wildlife have collected and categorized over 65 items of mostly single-use plastic waste on a single day annually from 1988 to present.

355. Since 1985, more than 1.7 million volunteers have removed over 26 million pounds of trash from beaches and inland waterways across California. ExxonMobil's polymer products are used to make the plastic items within the top 10 items collected on California Coastal Cleanup Day. These single-use plastic items found on California beaches are made, in part, from polymers and plastics produced by ExxonMobil and manufactured by ExxonMobil's customer brands. (See Figure C above).

**Figure I: Surfrider Foundation Report of Top Beach Cleanup Items in 2023**

Surfrider's 2023 Assessment of 685 Beach Cleanups in the United States



356. Studies dating from at least 10 years ago show that plastic accounts for approximately 90 percent of all floating marine debris.

357. ExxonMobil externalized the cost of addressing plastic waste and pollution onto the State, its People, and its ecosystems by expanding its plastic production without regard for the end-life of its product, including the impact of plastic waste and the inability of plastic recycling to meaningfully address the massive amount of plastic waste produced. ExxonMobil's contribution to the plastic waste and pollution crisis through its deceptive messages caused and

continues to cause the State substantial harm. The plastic ExxonMobil produces foreseeably becomes plastic waste and pollution that impairs California’s public trust resources, including its tidelands, beaches, oceans, and all of the wildlife dependent upon these and other waterbodies and impedes the public’s enjoyment of and ability to recreate in these natural environments.

358. In addition to these harms, plastic pollution also results in concrete economic costs borne by public entities and taxpayers in California.

359. As explained above, there is a direct relationship between the rise in plastic production and the rise in plastic pollution in that “a 1% increase in production, result[s] in approximately a 1% increase in branded plastic pollution.”<sup>199</sup>

**A. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Harms California’s Natural and Public Trust Resources.**

360. Plastic pollution is pervasive in California. It is found throughout the state, including in the state’s rivers, lakes, bays, and ocean waters. Plastic is even found in protected coastal areas, such as the Monterey Bay National Marine Sanctuary and the Bodega Bay State Marine Reserve. California has 105 water bodies that contain so much debris and plastic that they are either already listed as having “impaired” water quality under the Clean Water Act or have been recommended for such a listing in the State Water Resources Control Board’s 2024 Integrated Report (pending approval by U.S. EPA), which identifies impaired water bodies. Plastic pollution in the state’s public trust lands impairs public trust resources and injures the public’s right and ability to freely use them.

361. California’s coastal public trust lands support a variety of ecological, socioeconomic, and cultural functions. Coastal wetlands and beaches support biodiversity and perform a variety of important ecosystem services, like buffering wave energy, filtering water, recycling nutrients, and serving as nursery habitat for fish species that are part of larger coastal ecosystems. All of these essential biological functions have been harmed by plastic waste and pollution that ExxonMobil has substantially caused, resulting in harm to the State’s ecosystems

<sup>199</sup> Cowger et al., *Global responsibility for plastic pollution*, 10 Science Advances 7 (Apr. 24, 2024).

1 and wildlife. Extensive research shows that exposure to plastic pollution has had substantial  
2 negative impacts on a wide range of freshwater, marine, and terrestrial species.

3 362. Plastic food packaging has been found in dead seabird stomachs in San Diego  
4 and Monterey since the 1970s. As plastic production has ramped up, California's wildlife  
5 increasingly suffers from plastic ingestion and entanglement.<sup>200</sup> Wildlife frequently mistakes  
6 plastic for food or inadvertently swallows plastic while feeding or swimming.<sup>201</sup> Ingesting plastic  
7 can obstruct digestion and lacerate intestines, which interferes with an animal's ability to feed and  
8 obtain nourishment.<sup>202</sup> Wildlife also become entangled in plastic, causing animals to drown,  
9 choke, or suffer physical trauma, such as amputation and infection, which interferes with feeding  
10 and foraging, leading to malnutrition and unnecessary death.<sup>203</sup>

11 363. The National Oceanic and Atmospheric Administration (NOAA) and the  
12 National Marine Fisheries Service (NMFS) reported that, in the last two decades, a total of 1,114  
13 marine mammals in California were entangled in plastic or plastic was found in the animal's  
14 stomach.<sup>204</sup> Some examples of marine life entanglement in California include a report that a long-  
15 beaked common dolphin was found with a food wrapper lodged in its esophagus, a northern  
16 elephant seal nursing its pup was found with a packing strap around its neck, and a leatherback  
17 sea turtle was found with plastic sheeting stuck in its gastrointestinal track. A separate study of  
18 stranded marine mammals on the central California coast between 2003 and 2015 showed marine  
19 debris entanglement was the main trauma category affecting pinnipeds, including California sea

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21 <sup>200</sup> Donnelly-Greenan et al., Moss Landing Marine Laboratories, Entangled  
22 Seabird and Marine Mammal Reports from Citizen Science Surveys from Coastal  
23 California (1997–2017), 149 Marine Pollution Bulletin (Aug. 28, 2019) (study in central CA from  
24 1997-2017 finding seabirds entangled in CA primarily from fishing lines; mostly in Monterey  
25 Bay NMS).

26 <sup>201</sup> Warner et al., *Oceana, Choked, Strangled, Drowned: The Plastics Crisis Unfolding in*  
27 *Our Oceans* (Nov. 2020).

28 <sup>202</sup> *Ibid.*

<sup>203</sup> *Ibid.*

<sup>204</sup> Fong, *California: Marine Mammals Tangled and Intoxicated by Plastic*, Internat.  
Marine Mammal Project (Aug. 20, 2020) <<https://savedolphins.eii.org/news/california-marine-mammals-tangled-and-intoxicated-by-plastic#:~:text=In%20the%20last%20two%20decades,was%20found%20in%20its%20stomach>>  
(as of July 29, 2024).

lions, elephant seals, and Guadalupe fur seals.<sup>205</sup>

364. California's wildlife is being directly harmed by ExxonMobil's plastic marine debris. Between 2008 and 2012, NOAA reports that marine debris off the coast of California seriously injured or killed 65 Californian sea lions, seven northern elephant seals, three sperm whales, two California harbor seals, and one long-beaked common dolphin.<sup>206</sup> In 2016, the Secretariat of the Convention on Biodiversity reported that marine debris entanglements had been documented for 519 species of animals, including 46 percent of all species of marine mammals.<sup>207</sup> Numerous studies show that plastic accounts for approximately 90 percent of all floating marine debris. ExxonMobil's plastic is killing California's marine life.

365. Marine debris also plagues birds in California. A study of six California counties showed seabirds accounted for 97 percent of all debris entanglement deaths from 1997 to 2017. The most affected species were the common murre, accounting for 23 percent of deaths, Brandt's Cormorant, accounting for 13 percent, followed by the Western Gull (9.6 percent), Sooty Shearwater (8 percent), and Brown Pelican (7 percent).

366. Marine debris also poses harms to California birds through ingestion. Birds that call California home, such as California condors, red-tailed hawks, red-shouldered hawks, great horned owls, and barn owls are known to ingest plastic pollution, some species mistaking it for food.<sup>208</sup> A study of California condor mortality, from 1992 through 2009, revealed that trash ingestion was the leading cause of death in nestlings, accounting for 73 percent of nestling deaths. Plastic pollution is so prevalent in bird stomachs, researchers have coined the term "plasticosis" to describe stomach damage related to ingesting plastic trash. As a consequence of plastic ingestion, a variety of bird species can suffer from nutritional deprivation, damage or obstruction

<sup>205</sup> Barcenas-De La Ceuz et al., *Evidence of Anthropogenic Trauma in Marine Mammals Stranded Along the Central California coast, 2003-2015*, 34 *Marine Mammal Science* 2 (Oct. 23, 2017).

<sup>206</sup> Carretta et al., *Nat. Oceanic and Atmospheric Admin., U.S. Pacific Marine Mammal Stock Assessments: 2018* (June 2019).

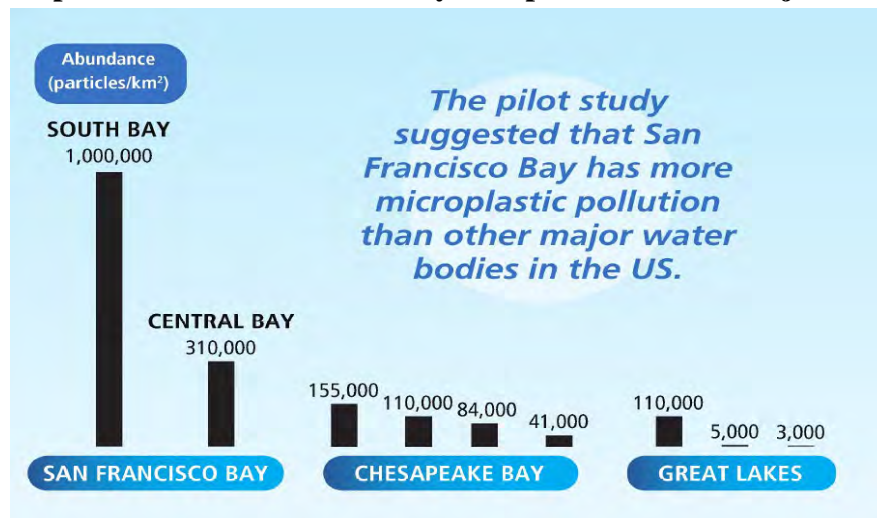
<sup>207</sup> Secretariat of the Convention on Biological Diversity, *Marine Debris: Understanding, Preventing and Mitigating the Significant Adverse Impacts on Marine and Coastal Biodiversity* (Technical Series No. 83) (2016) page 18.

<sup>208</sup> Leviner, et al., *Documentation of Microplastics in the Gastrointestinal Tracts of Terrestrial Raptors in Central California, USA*, 109 *California Fish and Wildlife Scientific Journal* 6 (July 10, 2023).

of the gut, and inflammatory responses, leading to reduced food intake, delayed ovulation, and increased mortality. A 2015 study revealed that ingestion or entanglement records for marine bird species had increased from 44 percent to 56 percent since the 1990s, as had the proportions of marine mammal, sea turtle, and marine fish species.<sup>209</sup> The increases in wildlife entanglement and ingestion of plastic coincides with the increase in ExxonMobil's production of plastic since the 1990s.

367. As plastic continues to degrade in the environment, it breaks down into smaller and smaller fragments, eventually becoming what is commonly referred to as "microplastics." Microplastics contaminate every level of the food web in California, and both plastic fragments and the chemicals they carry can bioaccumulate in the food web at multiple trophic levels. A recent study found that surface water "levels of microparticles in the [San Francisco] Bay were some of the highest observed globally," and that "microplastic contamination, a global concern, may be higher in San Francisco Bay than in other urban areas in North America."<sup>210</sup> And a 2019 study found that "between 4.7 and 7.2 trillion microplastics enter San Francisco Bay via [] small tributaries annually."<sup>211</sup>

**Figure J: Microplastics in San Francisco Bay Compared to Other Major U.S. Water Bodies**



<sup>209</sup> Good et al., *Plastics in the Pacific: Assessing Risk from Ocean Debris for Marine Birds in the California Current Large Marine Ecosystem*, 250 Biological Conservation 108743 (Oct. 2020).

<sup>210</sup> S.F. Estuary Institute and The 5 Gyres Inst., Executive Summary, San Francisco Bay Microplastics Project (2019).

<sup>211</sup> Sutton et al. Understanding Microplastic Levels, Pathways, and Transport in the San Francisco Bay Region. San Francisco Estuary Institute page 49.

1           368.       Exposure to plastic pollution and microplastics negatively impacts California's  
2 aquatic plants and wildlife. Studies show that microplastic exposure reduces root growth in  
3 aquatic plants native to California, decreases energy reserves in bivalves (mollusks), decreases  
4 juvenile growth rates in snails native to California, and can cause injury and inflammatory  
5 responses in zooplankton. Other studies show that mussel species had strong inflammatory  
6 responses when exposed to microplastic. Research suggests that the allocation of energy to  
7 immune responses may have detrimental effects to an organism's health over time. Two studies  
8 on Pacific oysters, also found in California, found that microplastic exposure and ingestion  
9 affected their physiology, behavior, and negatively affected oyster reproduction. Further, a study  
10 of San Francisco Bay found that microplastics pose a statistically significant risk to the health of  
11 aquatic ecosystems.<sup>212</sup>

12           369.       ExxonMobil has produced highly-refined white oils for polystyrene production  
13 for over a century and is a major producer of styrene copolymers. A study of polystyrene plastic  
14 found that plastic particles adhere to primary producers (phytoplankton and algae, which form the  
15 basis of the marine food chain) and that plastic is then found in the digestive organs of higher  
16 trophic species (i.e., in species that eat primary producers). A study of the remote Bodega Marine  
17 Reserve on California's coast found that the organisms sampled had "remarkably higher  
18 concentrations of microplastic particles than the environmental samples" (i.e., seawater), and that  
19 microplastic density increased with trophic level (position up the food chain). Similarly, a study  
20 of Monterey Bay, California, revealed that 58 percent of anchovy fish studied contained  
21 microplastics, while 100 percent of common murrelets studied, a predator of anchovy, contained  
22 microplastics.

23           370.       Other studies document that California's wildlife is ingesting microplastics. It  
24 was recently discovered that endangered blue whales, humpback whales, and fin whales off  
25 California's coast ingest far more plastic than previously understood. A blue whale may ingest 10  
26

27 \_\_\_\_\_  
28 <sup>212</sup> Coffin et al., *Risk Characterization of Microplastics in San Francisco Bay, California*,  
2 Microplastics and Nanoplastics 19 (July 7, 2022).

1 million pieces of microplastic in a single day.<sup>213</sup> illustrating the massive presence of plastic in the  
2 environment.

3 371. In an extensive review of scientific literature, a 2021 study by Dr. Matthew S.  
4 Savoca et al. at the Hopkins Marine Station of Stanford University found that 386 marine fish  
5 species are known to have ingested plastic debris, including 210 commercially important species.  
6 The research reveals that the consumption of plastic by fish is widespread and increasing, and that  
7 the 210 commercial species that were found to have ingested plastic is likely an underestimate.  
8 Over the last decade, the rate of plastic consumption by fish has doubled, increasing by 2.4  
9 percent every year. The Savoca study showed that new species of fish were discovered with  
10 plastic inside of them each year.

11 372. The evidence showing that plastic harms California wildlife is overwhelming.  
12 ExxonMobil's rampant plastic production, brought about by its decades-long campaign of  
13 deception regarding the recyclability of plastic, has substantially caused and is causing  
14 foreseeable harm to California's wildlife. The estimated cost of plastic degradation to the marine  
15 environment is \$33,000 per tonne of plastic waste,<sup>214</sup> though the true economic cost is likely to be  
16 greater. The State, its People, and its ecosystems, bear this cost. The plastic crisis that kills and  
17 injures California's wildlife is offensive and indecent, and any reasonable person would be  
18 annoyed or disturbed.

19 **B. Plastic Waste and Pollution Substantially Caused by ExxonMobil Harm**  
20 **the Public's Ability to Enjoy and Recreate in California.**

21 373. Plastic pollution of California's environment significantly interferes with the  
22 public's enjoyment and use of California's public spaces. Plastic waste and pollution negatively  
23 impact the recreational and aesthetic value of California's beaches, coastlines, environments,  
24 parks, lakes, rivers, and other waterways, and is costly to remove.

25 374. The presence of plastic litter and microplastics adversely affects the quality of

26 \_\_\_\_\_  
27 <sup>213</sup> Kahane-Rapport et al., *Field Measurements Reveal Exposure Risk to Microplastic*  
*Ingestion By Filter-Feeding Megafauna*, 13 Nature Communication 6327 (Nov. 1, 2022).

28 <sup>214</sup> Coffee et al., UCLA Luskin Ctr. for Innovation, *Plastic Waste in Los Angeles County: Impacts, Recyclability, and the Potential for Alternatives in the Food Service Sector* (Jan. 2020).

1 fresh and saltwater bodies of water in California and causes inconvenience and annoyance to any  
2 reasonable person. The condition affects a substantial number of people who use California  
3 waterways for commercial and recreational purposes and interferes with the rights of the public at  
4 large to a clean and safe environment.

5 375. The various beaches and wetlands that constitute public tidelands support public  
6 access and coastal recreational activities like surfing, sunbathing, swimming, birdwatching, and  
7 fishing. The Coastal Act mandates that California provide maximum access and recreational  
8 opportunities to the public and protect, encourage, and provide lower-cost visitor and recreational  
9 opportunities in the interest of environmental justice.

10 376. Plastic pollution is also damaging public spaces in California. For decades,  
11 single-use plastic waste has fouled California's beaches. Since 1985, the California Coastal  
12 Commission has organized its annual Coastal Cleanup Day to address litter in California. Since  
13 its inception, the Cleanup Day has collected over 26 million pounds of beach debris,  
14 approximately 81 percent of which is plastic. Since 1988, plastic waste, including cigarette filters,  
15 food wrappers, bags, and bottles have consistently ranked in the top 10 items found on  
16 California's beaches during the annual Cleanup Day.

17 377. Plastic pollution in the marine environment negatively impacts recreational  
18 activity in California. Plastic pollution creates a visual and aesthetic problem that impacts local  
19 tourism. Litter on beaches and coastlines discourages tourism—in fact, litter is often cited as a  
20 primary reason why tourists spend less time at or avoid certain locales. Beach visitors are likely to  
21 be concerned about marine debris because it poses potential physical harms from lacerations,  
22 bacterial infections, or entanglements during swimming, and because it detracts from the  
23 perceived natural beauty of an area.

24 378. A NOAA study found that Orange County residents avoided going to littered  
25 beaches and spent millions of dollars annually driving to cleaner beaches.<sup>215</sup> The study concluded  
26 that reducing marine debris by 50 percent would lead to a \$67 million benefit to Orange County

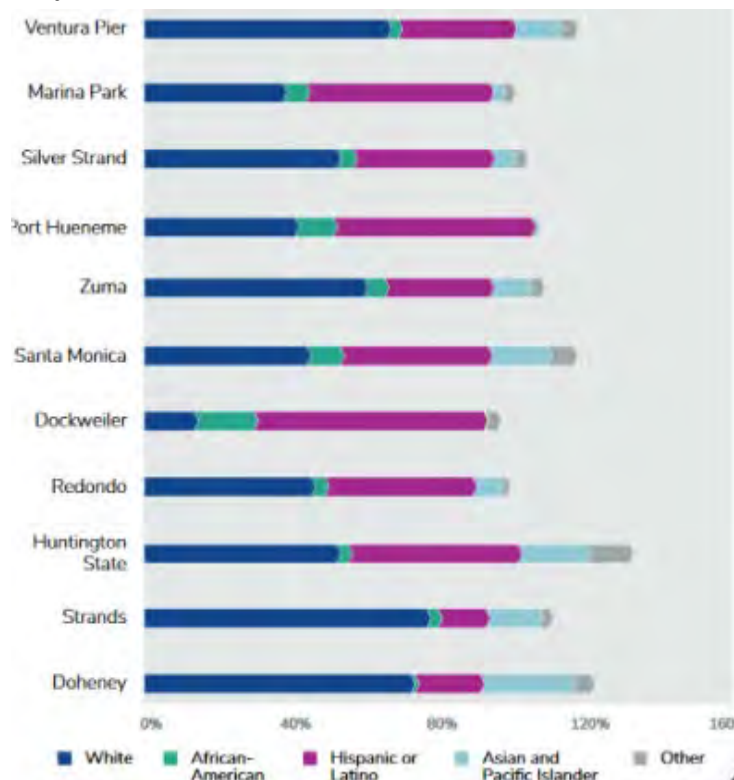
27 <sup>215</sup> Leggett et al., Industrial Economics, Inc. (prepared for Marine Debris Div., Nat.  
28 Oceanic and Atmospheric Admin.), Assessing the Economic Benefits of Reductions in Marine  
Debris-A Pilot Study of Beach Recreation in Orange County, California (June 15, 2014).

residents over a three-month period. Given the enormous popularity of California beaches, the magnitude of recreational losses associated with plastic debris is substantial.<sup>216</sup>

**C. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Disproportionately Affects California's Communities of Color and Low-Income Populations.**

379. Plastic beach pollution also disproportionately affects Black and Latinx residents in California. A UCLA study found that Dockweiler State Beach was the most popular Southern California beach for Black and Latinx visitors. See Figure K, below. Dockweiler State Beach had the fewest white visitors, and had the poorest visitors of all surveyed beaches, with most visitors' household income being below \$50,000 per year.<sup>217</sup> A separate federal study found that Dockweiler had the most trash density—primarily plastic waste—out of every Southern California beach surveyed.<sup>218</sup>

**Figure K: Ethnicity of Southern California Beach Visitors**



<sup>216</sup> Stickel, et al., Kier Associates (prepared for U.S. Environmental Protection Agency), The Cost to West Coast Communities of Dealing with Trash, Reducing Marine Debris (Sep. 2012) (west coast spends \$520 million per year to clean up pollution on coast).

<sup>217</sup> Christensen et al., UCLA Coastal Access Report Southern California Supplement (Jan. 25, 2017).

<sup>218</sup> Leggett et al., Assessing the Economic Benefits of Reductions in Marine Debris: A Pilot Study of Beach Recreation in Orange County, California, *supra*, at page 17.

1           380.       Plastic pollution in California also disproportionately harms subsistence fishing.  
2       Chemicals in marine plastic pollution may be ingested by fish, as well as adsorbed onto the  
3       plastic which is then ingested and bioaccumulated in fish. Smaller microplastics can be caught in  
4       the tissues of the gills, and the simple action of consuming plastic reduces the fish's capacity to  
5       ingest nutritious food and therefore lowers the nutritional and reproductive value of the fish.

6           381.       Because plastics disintegrate into infinitesimally small pieces in our waterways,  
7       they are ingested by filter-feeding organisms and thus have entered all links of the marine food  
8       chain. Californians who consume fish and other seafood, including those who fish for  
9       subsistence, thus also consume microplastics.

10          382.       Sea Grant-funded research has examined the demographics of anglers from San  
11       Diego Bay, San Francisco Bay, and Central Valley waterbodies. Based on 2015 Census tracts,  
12       almost all pier anglers reported under the 200 percent poverty level, defined as a household of  
13       four with a total annual income of less than \$50,000, with many under the 100 percent poverty  
14       level (less than \$25,000).

15          383.       The Sea Grant study shows only about 10 percent of pier and shore-based  
16       anglers had a college degree, and many never finished high school. By comparison, 50 to 75  
17       percent of private and charter boat-based anglers were college educated and had an annual  
18       income greater than \$50,000 per year. California pier anglers were predominantly Asian, with  
19       Hispanic and Black anglers present in lower yet substantial proportions. White anglers were the  
20       smallest demographic of pier anglers and the largest demographic of boat-based anglers.

21          384.       Sea Grant researchers also found that California pier anglers consume more of  
22       their catch than private boat, charter boat, and other shoreline anglers combined. The more times  
23       an angler fished per week, the higher their consumption rate.

24          385.       Based on this data, the majority of California pier anglers are people of color  
25       without a college degree from low-income communities who often eat what they catch. Locally  
26       caught fish as the primary protein in a diet is inexpensive but has other costs—higher levels of  
27       fish consumption mean higher levels of plastic pollution consumed.

28          386.       Consumption of sport fish is an important food source for Californians.

1 Approximately 33 percent of recreational and subsistence anglers in Los Angeles County  
2 consume their catches.

3 387. In California, there have for decades been coastal advisories aimed at limiting  
4 consumption of nearshore saltwater fish, such as White Croaker (*Genyonemus lineatus*), because  
5 of environmental contamination bio-accumulating in their bodies. Microplastic bioaccumulation  
6 in fish only stands to exacerbate concern about human consumption of these species.

7 388. The prevalence of plastic pollution in the marine food chain causes concerning  
8 risks for Californians who depend on the ocean for food, such as subsistence anglers, and also for  
9 recreational anglers. Furthermore, the relentless influx of plastic polluting vital food sources  
10 exacerbates the disparities faced by Black, Latinx, and other Californian people of color,  
11 particularly those with lower incomes who rely on these resources for sustenance.

12 389. ExxonMobil's substantial creation of the plastic waste and pollution crisis  
13 through its deception about plastic's recyclability has caused the State enormous harm. Residents  
14 cannot enjoy California's beaches, oceans, and other natural and public trust resources, including  
15 fish, to their full extent because of plastic pollution.

16 **D. ExxonMobil Substantially Caused and Is Causing Plastic Waste and**  
17 **Pollution That Harm California's Local Coastal Economies.**

18 390. Plastic pollution of California's environment has a range of economic costs to  
19 California, including loss of tourism and tax revenue for communities. Plastic waste and pollution  
20 also interfere with California's commercial and recreational fishing and boat navigation.

21 391. Additionally, plastic waste and pollution negatively impacts fish populations  
22 that California's fishing economy depends upon. Marine plastic pollution not only reduces the  
23 efficiency and productivity of commercial fisheries and aquaculture through physical  
24 entanglement and damage but also poses a direct risk to fish and shellfish stocks. A wide range of  
25 marine species, including those commonly consumed by humans, ingest plastic pollution directly  
26 or indirectly by ingesting plastic-contaminated prey. Plastic contamination in the food chain  
27 harms, sometimes lethally, fish and shellfish stocks, which impacts the productivity and  
28 profitability of California's fishing and aquaculture industries. Studies have shown that 25 percent

of California's commercial fish supply is contaminated with anthropogenic debris.<sup>219</sup> Another study shows that 25 percent of fish from a creek that flows into San Diego Bay contain microplastics.<sup>220</sup>

**E. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Results in Significant Economic Harm to California Taxpayers and Public Entities.**

392. Plastic pollution of California's environment has caused and continues to cause direct economic harm to public entities and taxpayers in California. The costs of managing and cleaning up plastic waste are largely borne by residents and taxpayers via municipal governments. Those costs have grown over the past three decades, as explained in more detail in the following paragraphs.

393. Through its deception about the capacity of recycling to solve the plastic waste and pollution crisis, ExxonMobil worked to avoid any limitations on or pressures on its business model. California's state and municipal governments and California residents/taxpayers bear the tangible and quantifiable costs of ExxonMobil's campaign of deception.

**1. Costs for collecting, hauling, and disposing of plastic waste.**

394. California households pay for the collection, hauling, and disposal of plastic waste. Over the past three decades, the amount of plastic waste has skyrocketed due to ExxonMobil's expansion of its plastic production, which, coupled with ExxonMobil's decades-long campaign of deception around recycling, has foreseeably led to store shelves flooded with products in plastic packaging and a plastic waste and pollution crisis. Since plastic recycling is not economically viable at scale, consumers have been forced to pay for disposal of more plastic waste. At the same time, the cost of waste disposal has also increased.<sup>221</sup>

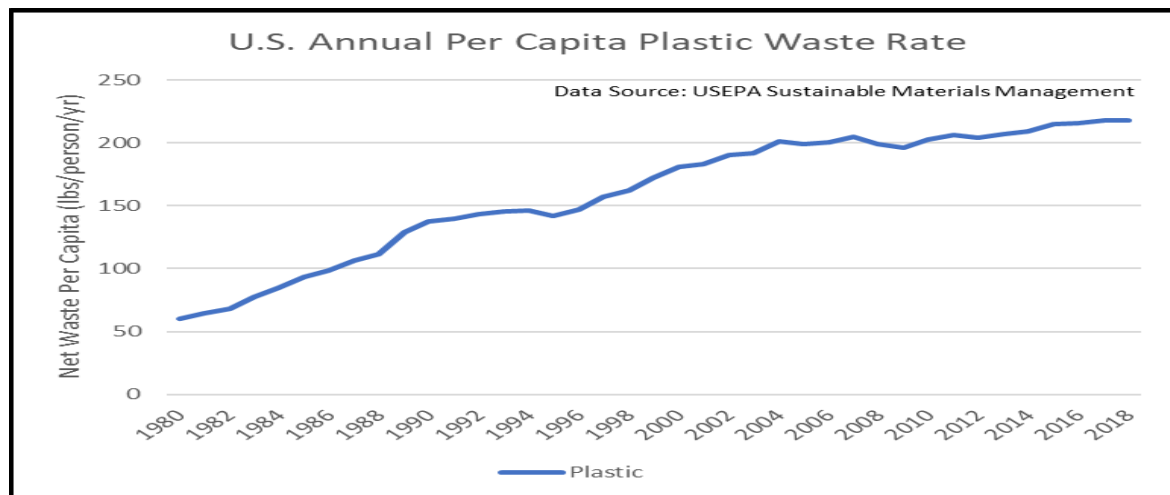
<sup>219</sup> Rochman et al., *Anthropogenic Debris in Seafood: Plastic Debris and Fibers from Textiles in Fish and Bivalves Sold for Human Consumption*, 5 Scientific Reports 14340 (Sep. 24, 2015).

<sup>220</sup> Talley et al., *Natural History Matters: Plastics in Estuarine Fish and Sediments at the Mouth of an Urban Watershed*, PLOS One (Mar. 18, 2020).

<sup>221</sup> Global Disposal, [Rising Waste Disposal and Recycling Costs for California Communities: What You Should Know](https://www.globaldisposal.com/blog/rising-waste-disposal-and-recycling-costs-for-california-communities-what-you-should-know) (Oct. 21, 2022) <<https://www.globaldisposal.com/blog/rising-waste-disposal-and-recycling-costs-for-california-communities-what-you-should-know>> (as of July 29, 2024).

395. The U.S. Environmental Protection Agency (USEPA) published plastic waste data at the national level from 1960 through 2018.<sup>222</sup> Figure L, below, shows that the national average per capita plastic waste generation rate increased from 60 pounds per person per year in 1980 to 137.3 pounds per person per year in 1990 to 218.3 pounds per person per year in 2018.

**Figure L: United States Annual Per Capita Plastic Waste Rate**



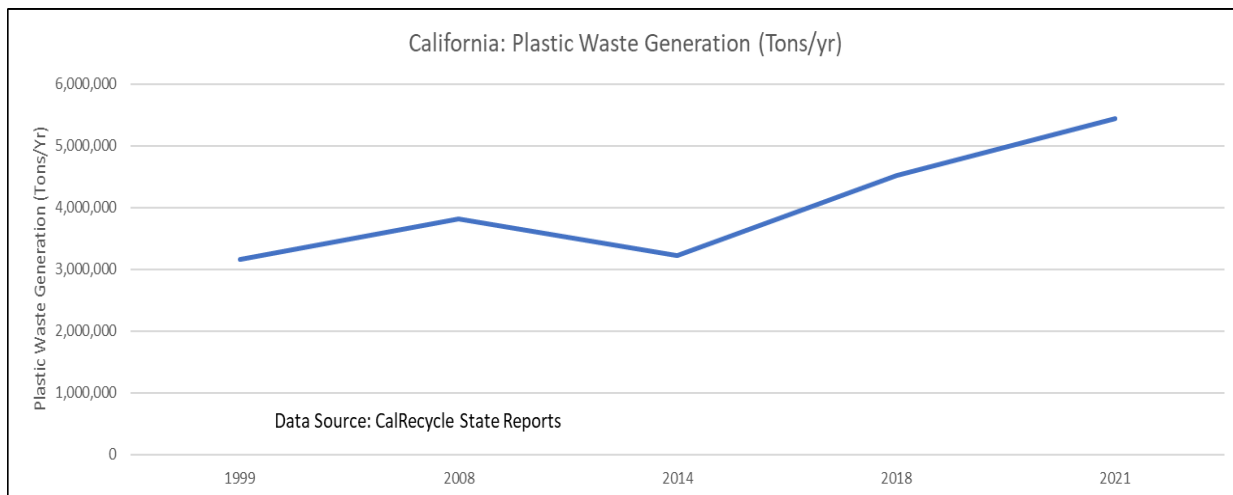
396. CalRecycle has published waste characterization reports since 1999. Figures L and M, below, summarize the plastic waste data included in CalRecycle's reports for 1999, 2008, 2014, and 2021. Using California's population data over that period, plastic waste generation per capita grew approximately from 190.78 pounds per person per year in 1999 to 278.21 pounds per person per year in 2021.

**Figure M: Summary of CalRecycle Waste Characterization Data**

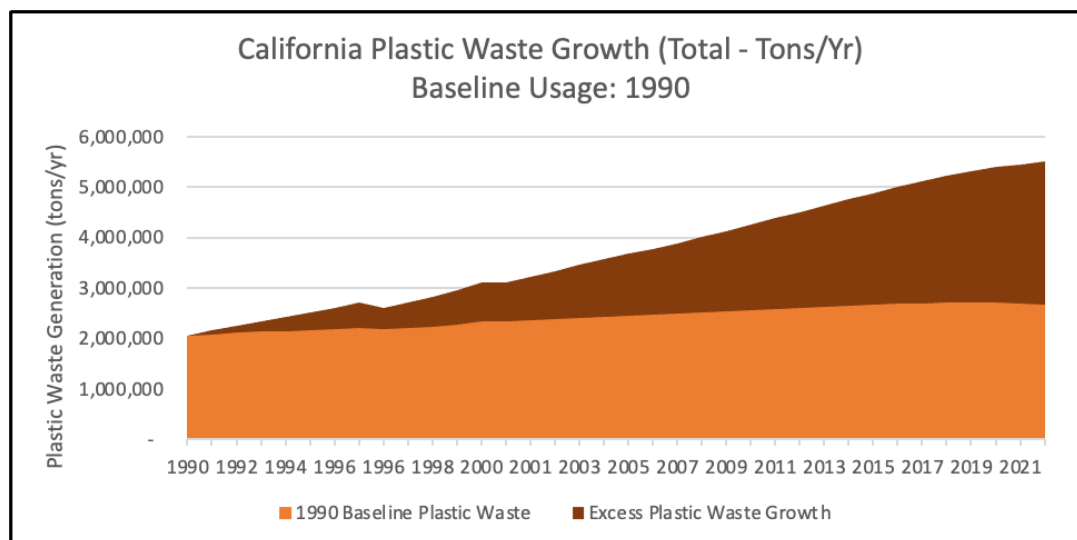
CA Waste Characterization	1999	2008	2014	2018	2021
Percent plastic	8.9%	9.6%	10.4%	11.5%	13.7%
Total Plastic Waste (U.S. tons)	3,161,777	3,807,952	3,215,943	4,524,052	5,445,299
Population <sup>223</sup>	33,145,121	36,604,337	38,586,706	39,437,463	39,145,060
Per capita (Pounds/person/year)	190.78	208.06	166.69	229.43	278.21

<sup>222</sup> U.S. Environmental Protection Agency, Studies, Summary Tables, and Data Related to the Advancing Sustainable Materials Management Report.

<sup>223</sup> MacroTrends, California Population 1900-2023 <[https://www.macrotrends.net/global-metrics/states/california/population#google\\_vignette](https://www.macrotrends.net/global-metrics/states/california/population#google_vignette)> (as of July 29, 2024).

**Figure N: Summary of CalRecycle Waste Characterization Data**

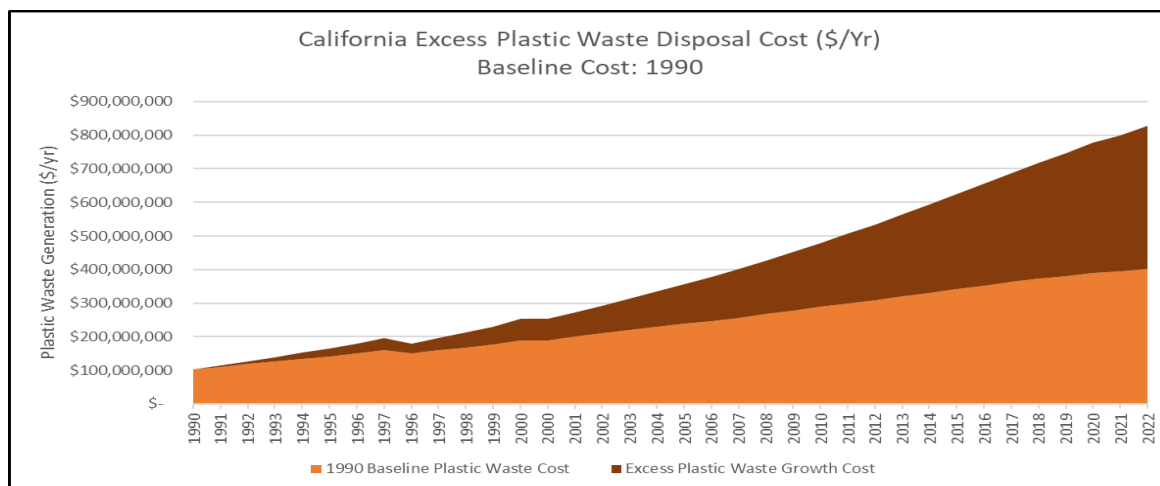
397. As discussed above, ExxonMobil, independently and through its involvement in plastics industry and front groups, has misled consumers, policymakers, and regulators about the ability of plastic recycling to handle the massive volume of plastic waste since the 1980s, which led to a glut of plastic waste. Figure O, below, the growth in excess plastic waste over the 1990 baseline, shows that between 1990 and 2022, about 47 million tons of excess plastic waste was generated in California.<sup>224</sup>

**Figure O: California Excess Plastic Waste Growth (1990 to 2022)**

<sup>224</sup> This estimate is based on the U.S. EPA 1990 baseline of 137.3 pounds per person per year of plastic waste generation, the CalRecycle 2021 figure of 278.21 pounds per person per year of plastic waste generation, and California's population data. For the purpose of creating a credible, conservative cost estimate, a baseline year of 1990 was assumed for determining the "excess" plastic waste generated since ExxonMobil's plastic recycling campaign significantly increased at that time.

398. Figure P, below, shows the growth in cost to collect, haul, and dispose of California's plastic waste from 1990 to 2022.<sup>225</sup> Over that time, the per U.S. ton cost to collect, haul, and dispose of all waste has risen dramatically. This cost assumes that the average statewide cost to collect, haul, and dispose of waste in 1990 was \$50 per U.S. ton and has increased to \$150 per U.S. ton<sup>226</sup> in 2022, based on an increase in rate of 200% in waste management costs over that 32-year period. Based on this data and these assumptions, the cost to Californians to collect, haul, and dispose of excess plastic waste from 1990 through 2022 was \$5.5 billion dollars (without accounting for inflation).

**Figure P: California Excess Plastic Waste Disposal Cost**



## 2. Costs of plastic contamination in California's recycling system.

399. The increasing plastic waste resulting from ExxonMobil's increasing production of new plastic has also led to increased recycling costs for California. In 1989, the California State Legislature signed Assembly Bill (AB) 939 into law, which mandated every local jurisdiction in California to reduce their 1990 baseline waste by 25 percent by the year 1995, and by 50 percent by the year 2000. In 2011, AB 341 established a statewide goal that at least 75 percent of solid waste generated should be source-reduced, recycled, or composted by the year 2020. As a direct result of the 1989 legislation, cities in California were required to design and

<sup>225</sup> *Ibid.*

<sup>226</sup> See, e.g., City of Berkeley, Transfer Station <<https://berkeleyca.gov/city-services/trash-recycling/transfer-station>>; Del Norte County, Schedule B: Transfer Station Rates <<https://recycledelnorte.ca.gov/dist/docs/rates/dnco-rates.pdf>> ([as of July 29, 2024](#)).

1 implement curbside recycling programs that required mandatory participation by all residents.

2 400. Plastic contaminates the processing and sorting of post-consumer materials  
3 placed in curbside recycling bins and causes a significant and quantifiable cost. This  
4 contamination is the direct result of ExxonMobil's deceptive messages regarding plastic recycling  
5 and its promotion of false recyclable labels (such as the chasing arrows symbol, discussed above),  
6 which misled consumers to believe that the majority of plastics can be recycled. Based on this  
7 misconception, consumers put a wide range of plastics in the recycling bin. These plastics,  
8 particularly single-use plastics such as plastic bags and films, contaminate the waste stream with  
9 material that is not actually recyclable.<sup>227</sup> A 2019 survey showed that more than half of  
10 Californians mistakenly put plastic bags in recycling bins.<sup>228</sup>

11 401. A contaminated waste stream has economic costs: it increases collection and  
12 processing costs and damages sorting systems and equipment.<sup>229</sup> Energy, equipment, trucking,  
13 and labor costs and carbon emissions are wasted from collecting and sorting unwanted, worthless  
14 items through municipal sortation systems.<sup>230</sup> According to a survey by the industry publication  
15 Waste Dive, over 100 cities canceled their curbside recycling systems with contamination cited as  
16 a major contributing factor for closure.<sup>231</sup> Contamination harms the ability of sorting facilities to  
17 effectively sort other materials such as cardboard and paper that are easily ruined by contact with  
18 food-soiled packaging.<sup>232</sup> Collected curbside recycled materials are screened by material recovery  
19 facilities (MRF), waste sorting plants that separate and prepare single-stream recycling materials  
20 for sale to end buyers. If the screening reveals excessive contamination, the entire truckload may  
21 be sent to a landfill. This disrupts California's curbside recycling system, in that large volumes of

22 <sup>227</sup> Rachelson, *What is Recycling Contamination, and Why Does it Matter?* Rubicon  
23 (updated Feb. 6, 2023) <<https://www.rubicon.com/blog/recycling-contamination/>> (as of July 29, 2024).

24 <sup>228</sup> Tanimoto, The Recycling Partnership, 2019 West Coast Contamination Initiative  
Research Report (Apr. 2020).

25 <sup>229</sup> Oregon Truth in Labeling Task Force, Truth in Labeling Final Report and  
Recommendations (June 1, 2022).

26 <sup>230</sup> Rachelson, *What is Recycling Contamination, and Why Does it Matter?*, *supra*.

27 <sup>231</sup> Waste Dive, *Where Curbside Recycling Programs Have Stopped and Started in the US*  
(Dec. 18, 2019, updated Jan. 9, 2023) <<https://www.wastedive.com/news/curbside-recycling-cancellation-tracker/569250/>> (as of July 29, 2024).

28 <sup>232</sup> Marshall et al., *The Heavy Toll of Contamination*, Recycling Today (May 2017)  
<<https://www.recyclingtoday.com/article/the-heavy-toll-of-contamination/>> (as of July 29, 2024).

1 non-plastic recyclable materials (e.g., cardboard, metal, glass) do not get recycled.

2 402. Based on the available data and cost assumptions, the cost of plastic  
3 contamination from curbside bins over the 1990 to 2022 period is estimated to be \$15.7 billion in  
4 California (without accounting for inflation).

5 **3. Costs for worker injuries from plastic contamination in California's**  
6 **recycling system.**

7 403. Increased plastic contamination in California's recycling system threatens  
8 worker safety. In 2021, refuse and recyclable material collection was considered the seventh  
9 deadliest job in the country. According to data collected by the U.S. Department of Labor's  
10 Bureau of Labor Statistics in the Census of Fatal Occupational Injuries, refuse and recyclable  
11 material collectors had a fatal injury rate of 27.9 per 100,000 full-time equivalent workers.<sup>233</sup>  
12 Risks of injury and harm are increased when workers need to sort through increasingly  
13 contaminated loads and remove contaminants, such as plastic, from machinery.<sup>234</sup>

14 404. These increased costs are also the direct and foreseeable result of ExxonMobil's  
15 deceptive marketing to the public around the feasibility of plastic recycling to handle the massive  
16 amount of plastic waste generated. According to Susan Epps, a leading authority on MRFs safety,  
17 who participated in an investigation in 2019 by Waste Dive, "Any time someone puts an item in  
18 the recycling stream that's not accepted, it's usually someone else's job to take it out. Any time  
19 you touch material you have an opportunity to have an injury. And so, the number of  
20 opportunities in these facilities is great." "With fluctuating injury rates, and ongoing fatalities,  
21 MRFs remain a key safety challenge." In fact, these recycling facilities have been singled out by  
22 the Bureau of Labor and Standards for having some of the highest rates of days away, restricted  
23 or transferred (DART) among all occupations in the United States.

24 405. A July 2022 *CBS Morning News* segment also illustrates the dangers recycling  
25 workers face, as well as the increased risk of danger when unrecyclable products are placed in the  
26 recycling stream. In the video, a MRF worker explains the multiple harms caused by

27 <sup>233</sup> U.S. Dept. of Labor, National Census of Fatal Occupational Injuries 2021 (Dec. 16,  
28 2022).

<sup>234</sup> Rachelson, *What is Recycling Contamination, And Why Does it Matter?*, *supra*.

contamination of the recycling stream with flexible plastic packaging. He states that MRF workers must clean plastic waste from the equipment for two hours every day. The MRF worker states that flexible plastic film packaging can cause fires in MRFs. Plastic is highly flammable, and MRFs and plastic recycling facilities can operate with inadequate environmental protections. As shown by a massive fire at a plastic recycling and storage facility in Indiana in April 2023, significant health, social, and economic harms to communities can result from fires fueled by plastic waste.

**4. Plastic manufacturing plants and recycling centers disproportionately impact communities of color and low-income populations.**

406. Because of ExxonMobil's campaign of deception regarding the ability of plastic recycling to handle the massive amount of plastic waste generated, plastic waste and pollution has overrun the fragile system built to process it. MRFs and plastic manufacturing plants predominantly located in California's most vulnerable and already environmentally overburdened communities are causing an excess of truck impacts, odors, and injury.

407. MRFs and plastics manufacturing plants, which are necessitated by ExxonMobil's campaign of deception around the recyclability of plastic, are often sited in or near marginalized communities of color.<sup>235</sup> For example, plastic manufacturing plants and MRFs<sup>236</sup> are located in the most polluted neighborhoods in greater Los Angeles,<sup>237</sup> which are predominately Latinx and Black.<sup>238</sup> According to CalEnviroScreen 4.0,<sup>239</sup> Latinx populations experience the heaviest environmental burden in Los Angeles. The cities of Compton, Lynwood,

<sup>235</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes and Recycling*, *supra*.

<sup>236</sup> Leif, *EPA Leader Connects Recycling and Environmental Justice*, Resource Recycling (May 4, 2021) <[https://resource-recycling.com/recycling/2021/05/04/epa-leader-connects-recycling-and-environmental-justice/?utm\\_medium=email&utm\\_source=internal&utm\\_campaign=May+4+RR](https://resource-recycling.com/recycling/2021/05/04/epa-leader-connects-recycling-and-environmental-justice/?utm_medium=email&utm_source=internal&utm_campaign=May+4+RR)> (as of July 29, 2024).

<sup>237</sup> Cal. Office of Environmental Health and Hazard Assessment, CalEnviroScreen 4.0 <<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>> (as of July 29, 2024).

<sup>238</sup> *Ibid*; Best Neighborhood, *Race Map for Los Angeles, CA and Racial Diversity Data* <<https://bestneighborhood.org/race-in-los-angeles-county-ca/>> (as of July 29, 2024).

<sup>239</sup> CalEnviroScreen is a tool that measures environmental health in California communities; it functions as an internet mapping tool to analyze colocation of different environmental burdens.

1 and Carson, for example, have the highest pollution burden scores in CalEnviroScreen and are  
 2 predominantly made up of Latinx, Black, and Asian-American populations. Los Angeles County  
 3 has 28 MRFs, 14 of which are clustered along the corridors along the I-5, I-110, and I-710  
 4 freeways.

5 408. Proximity to MRFs is highly correlated with physical respiratory injury in  
 6 children and noxious odors in neighborhoods such as Oak View in Huntington Beach.<sup>240</sup> This  
 7 neighborhood is in the 93<sup>rd</sup> percentile for pollution burden and is 66 percent Latinx according to  
 8 the CalEnviroScreen 4.0 tool and recent census data.

9 409. Data shows that these plastic producing facilities and MRFs are located within  
 10 environmentally overburdened communities and communities of color. These communities also  
 11 bear the brunt of climate change impacts, which are exacerbated by greenhouse gas emissions  
 12 attributable to the production, transport, and disposal of plastic and plastic waste. Air emissions  
 13 (including greenhouse gases, odors, and toxic pollutants from plastics manufacturing facilities  
 14 and MRFs) will continue to disproportionately impact these overburdened communities as long as  
 15 Defendants' actions remain unchecked.

## 16 **5. Costs for plastic litter clean-up.**

17 410. California's local jurisdictions expend significant sums to clean up and prevent  
 18 plastic pollution from further damaging the environment (plastic comprises an estimated 80  
 19 percent of total litter). These clean-up costs include litter remediation efforts such as beach and  
 20 waterway clean-up, street sweeping, storm drain grate cleaning and maintenance, storm water  
 21 capture device installation, manual litter clean-up, and public re-education.

22 411. A 2013 Natural Resources Defense Council (NRDC) report concluded that  
 23 California local governments spend more than \$428 million annually to prevent litter, over 80  
 24

25 <sup>240</sup> The Rainbow MRF in Huntington Beach can be found on the Cal EnviroScreen  
 26 website here: <https://oehha.ca.gov/calenviroscreen>, using the SB 535 Disadvantaged  
 27 Communities overlay, and has been the subject of numerous news articles. See, e.g., Mellen,  
 28 *After Years of Complaints about Odor Pollution HB School District Settles Suit with Trash  
 Hauler*, Orange County Register (Nov. 17, 2016) <<https://www.ocregister.com/2016/11/17/after-years-of-complaints-about-odor-pollution-hb-school-district-settles-suit-with-trash-hauler/>> (as of  
 July 29, 2024) (as of July 29, 2024).

1 percent of which is plastic, from entering waterways.<sup>241</sup> Since 2013, the plastic waste and  
 2 pollution crisis in California has only intensified. New research suggests costs of litter  
 3 management to city governments have more than doubled over the last 10 years, and now stand at  
 4 approximately \$1 billion per year total across the state.

5 412. In order to confront the crisis of rising plastic waste and pollution, the State has  
 6 undertaken, and continues to undertake, complex and costly monitoring, research, regulatory,  
 7 mitigation, and remediation efforts. This essential work has caused the State and its taxpayers to  
 8 incur significant economic harm.

9 **6. Impacts to California's environment forces California to adopt**  
 10 **legislation and regulatory programs to combat the increased plastic**  
 11 **pollution caused by ExxonMobil's campaign of deception around**  
 12 **plastic recycling.**

13 413. ExxonMobil exacerbated the plastic crisis by overproducing virgin plastic while  
 14 misleading consumers to believe that recycling is a viable waste management strategy and renders  
 15 single-use plastic sustainable. As a result, the State has been forced to take necessary action to  
 16 combat plastic pollution and will be required to continue ramping up costly regulatory and  
 17 remedial activities in the future to address the plastics crisis substantially and proximately caused  
 18 by ExxonMobil's deception.

19 414. Implementing regulatory programs to address plastic waste and pollution—both  
 20 in the past, through the present, and increasingly over the future—requires a significant public  
 21 cost. This cost will increase as additional regulatory programs needed to fully address the plastic  
 22 waste and pollution crisis in California are implemented.

23 415. The California legislature has taken multiple approaches to reducing plastic  
 24 waste. California's legislature passed Senate Bill (SB) 54 (Allen, Chapter 75, Statutes of 2022) —  
 25 the Plastic Pollution Prevention and Packaging Producer Responsibility Act—and Senate Bill 343  
 26 (Allen, Chapter 507, Statutes of 2021), which restricts the use of recycling claims on products and

27 <sup>241</sup> Stickel et al., Kier Associates (prepared for Natural Resources Defense Council),  
 28 Waste in Our Water: The Annual Cost to California Communities of Reducing Litter That  
 Pollutes Our Waterways (Aug. 2013) page 19.

1 would prohibit the sale, distribution, or import of products with deceptive or misleading claims  
2 about recyclability.

3 416. In addition, Senate Bill 1335 (Allen, Chapter 610, Statutes of 2018) established  
4 the Sustainable Packaging for the State of California Act of 2018. Beginning January 1, 2021, a  
5 food service business on state property is prohibited from dispensing prepared, ready-to-eat food  
6 or beverages that are not packaged in a reusable, recyclable, or compostable manner.<sup>242</sup>

7 417. Trash, including mostly plastic debris, commonly pollutes State waters,  
8 transported by storm water, including through storm drains. The storm drains often convey water  
9 directly to water bodies, contributing to the expanded list of California's impaired water bodies.  
10 The presence of emerging contaminants, including microplastics in urban runoff, presents  
11 significant challenges for storm water capture and use or aquifer recharge through infiltration.

12 418. The State also bears the cost of addressing the plastic pollution on California's  
13 highway system infrastructure, which ExxonMobil substantially and proximately caused and  
14 continues to exacerbate. Roadway litter, most of which is plastic, clogs freeways and endangers  
15 travelers. Constant maintenance, expensive equipment, and costly public education campaigns are  
16 required to keep the highways and roads free of plastic pollution.

17 419. For example, costly capture devices are required to keep the highway system,  
18 an integral part of Californian infrastructure, functional and safe. Procurement and installation of  
19 these devices costs approximately \$150,000 to \$300,000 per acre of watershed. Current estimates  
20 show at least 22,000 acres will require capture devices to maintain highways statewide. It would  
21 require a minimum of *between \$3.3 to \$6.6 billion* to address this issue alone.

22 420. The State must also fund programs to keep its park lands and coastlines free of  
23 plastic. Plastic does not biodegrade and lasts forever in a park unit; therefore, constant

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24 <sup>242</sup> See also Assem. Bill 2812 (2015-2016 Reg. Sess.) [recycling in office buildings];  
25 Assem. Bill 901 (2015-2016 Reg. Sess.) [quarterly waste and recycling reporting to CalRecycle];  
26 Assem. Bill 2675 (2014-2015 Reg. Sess.) [state agency purchases of recycled products]; Assem.  
27 Bill 341 (2011-2012 Reg. Sess.) [separation of recyclable materials and implementation of solid  
28 waste recycling programs, statewide 75 percent recycling goal to be achieved by 2020]; Assem.  
Bill 939 (1989 as amended) [divert 25 percent of solid waste by 1995 and 50 percent by year  
2000].

1 maintenance must be done to abate the increasing amounts of plastic that enter the environment.  
 2 Data from citizen clean-ups shows over 50 percent of reported litter collected by volunteers in  
 3 California state parks contains plastic such as bottles, plastic bags, and food wrappers. While  
 4 ExxonMobil continues to produce more and more virgin plastic and deceive the public,  
 5 Californians are left to clean up the mess, year after year.

6 421. The plastic pollution crisis and growing problem of microplastic pollution in  
 7 California's environment has necessitated the development of statewide strategies and guidance,  
 8 including the California Ocean Litter Prevention Strategy<sup>243</sup> and the Statewide Microplastics  
 9 Strategy, to improve coordination across state agencies to advance solutions and guide State  
 10 investments to reduce and prevent ongoing plastic pollution.

11 422. California taxpayers should not bear the entirety of the public investment  
 12 needed to understand, and ultimately remediate, the multitude of damaging effects of plastics.  
 13 Instead, this cost should be allocated to those, such as ExxonMobil, that are responsible for  
 14 creating and intensifying the plastic waste and pollution crisis by its decades-long efforts to  
 15 deceive the public into believing that we can recycle our way out of this mess while  
 16 simultaneously continuing to saturate consumers with an increasing amount of single-use virgin  
 17 plastic materials and products despite the known and foreseeable harms and risks.

## 18 CAUSES OF ACTION

### 19 FIRST CAUSE OF ACTION

#### 20 Public Nuisance

21 (Civil Code Sections 3479, 3480, and 3494)

22 423. Plaintiff re-alleges and incorporates by reference the allegations in each of  
 23 paragraphs 1 through 422 as though fully set forth herein.

24 424. Under Civil Code section 3479, a "nuisance" is "anything which is indecent or  
 25 offensive to the senses," or "an obstruction to the free use of property, so as to interfere with the  
 26 comfortable enjoyment of life or property," or "unlawfully obstructs the free passage or use, in  
 27

28 <sup>243</sup> OPC 2018, *supra*.

1 the customary manner, of any navigable lake, or river, bay, stream, canal, or basin, or any public  
2 park, square, street, or highway.”

3 425. Under Civil Code section 3480, a “public nuisance” is “one which affects at the  
4 same time an entire community or neighborhood, or any considerable number of persons,  
5 although the extent of the annoyance or damage inflicted upon individuals may be unequal.”

6 426. Defendants, individually and in concert with each other, by their affirmative  
7 acts and omissions, have created, caused, contributed to, and assisted in creating harmful plastic  
8 pollution throughout California, which threatens and harms the environment, wildlife, and  
9 communities. These harms are indecent and offensive to the senses, and obstruct the free use of  
10 property, so as to interfere with the comfortable enjoyment of life or property, and therefore  
11 constitute a nuisance.

12 427. Defendants caused, assisted in causing and/or contributed to plastic pollution  
13 that harms and threatens to harm the California environment, wildlife, natural resources, and  
14 communities, by (1) promoting and vastly increasing the production of single-use plastic, while  
15 (2) deceptively promoting that recycling would take care of the consequent tremendous increase  
16 in plastic waste, and (3) while knowing that increasing plastic waste inevitably leads to increasing  
17 plastic pollution and (4) knowing that once plastic enters the environment, it leads to  
18 environmental harms, including through microplastic pollution, which poses an even greater  
19 threat of harm to all living things.

20 428. The plastic-related harms that Defendants created, caused, contributed to, and  
21 assisted in the creation of have substantially and unreasonably interfered with the exercise of  
22 rights common to the public, including the public safety, the public peace, and the public comfort.  
23 These interferences with public rights include, among other things, harms caused to animal  
24 health; aesthetic and physical harm to public spaces and wildlife; interference with the public  
25 recreation and the local coastal economy; disproportionate harms to communities of color; and  
26 contamination of groundwater, beaches, and waterways.

27 429. Defendants caused and/or contributed to the alleged public nuisance by  
28 designing, marketing, developing, distributing, selling, manufacturing, releasing, supplying,

1 using, and/or enabling plastic production and promoting plastic to the public, including  
2 Californians, as sustainable through the use of recycling and “advanced recycling”—all while  
3 knowing to a substantial certainty that the foreseeable and intended use of these products and  
4 recycling or “advanced recycling” would lead to widespread contamination and pollution in  
5 California.

6 430. Defendants and each of them, knowingly, intentionally, and/or recklessly  
7 created, caused, or assisted in the creation of a nuisance by falsely promising Californians, for  
8 almost half a century, that recycling and “advanced recycling” would take care of the ever-  
9 increasing amount of plastic waste generated by Defendants’ production, sale, and promotion of  
10 its plastic products at all times, up to and including today.

11 431. The plastic-related harms that Defendants created, caused, contributed to, and  
12 assisted in the creation of are present throughout California, and therefore affect a considerable  
13 number of persons in California.

14 432. An ordinary person would be reasonably annoyed or disturbed by these harms.

15 433. The harms caused by Defendants’ nuisance-creating conduct are extremely  
16 grave, and far outweigh the social utility of that conduct.

17 434. The plastic-related harms that Defendants created, caused, contributed to, and  
18 assisted in the creation of continue to harm the State and its people into the present day, and will  
19 continue to harm the State and its people many years into the future.

20 435. The State and its people did not consent to Defendants’ conduct.

21 436. The misconduct of Defendants, and each of them, was a substantial factor in  
22 bringing about the continuing public nuisance.

23 437. As a direct and proximate result of Defendants’ acts and omissions, the State  
24 has been required and will be required to expend significant public resources to mitigate the  
25 impacts of plastics-related harms throughout California.

26 438. As a direct and proximate result of Defendants’ acts and omissions,  
27 Californians have sustained and will sustain injuries to public safety and welfare; the loss of use  
28 and enjoyment of natural resources; and obstruction to the free use of public property.

439. Defendants' acts and omissions have caused or threaten to cause injuries to people, properties, and natural resources in California that are indivisible.

## SECOND CAUSE OF ACTION

## Action for Equitable Relief for Pollution, Impairment, and

## Destruction of Natural Resources

(Government Code section 12607)

440. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

441. Government Code section 12607 authorizes the Attorney General to “maintain an action for equitable relief in the name of the people of the State of California against any person for the protection of the natural resources of the state from pollution, impairment, or destruction.”

442. The statutory term “natural resource” is defined as including “land, water, air, minerals, vegetation, wildlife, silence, historic or aesthetic sites, or any other natural resource which, irrespective of ownership contributes, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community.” (Gov. Code, § 12605.)

443. Defendants, and each of them, have engaged in and continue to engage in, conduct that caused or contributed to the pollution, impairment, and destruction of natural resources, including, but not limited to:

a. Designing, marketing, developing, distributing, selling, manufacturing, releasing, supplying, using, and/or enabling plastic production and promoting plastic to the public, including Californians, as sustainable through the use of recycling and “advanced recycling”—all while knowing to a substantial certainty that the foreseeable and intended use of these products and recycling or “advanced recycling” would lead to widespread contamination and pollution in California;

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- b. Promoting, manufacturing, distributing, marketing and/or selling plastic and especially single-use plastic products without adequate testing or analysis of their impact on communities, and their persistence and disintegration in the environment;
- c. Concealing hazard information from regulators and the public;
- d. Concealing studies and other documents showing the dangers of plastic and the truth about the ability of mechanical recycling and “advanced recycling” to address the massive volume of plastic waste and pollution generated;
- e. Promoting, manufacturing, distributing, marketing and/or selling plastic recycling including “advanced recycling” to the public in California as a means to render plastic, particularly single-use plastic, sustainable, despite knowing that the infrastructure, market, and technology for plastic recycling, particularly for single-use plastics, are and would remain wholly inadequate for the volume of plastic produced and are technically and economically not viable at scale.

444. As a result of Defendants’ misconduct, plastics are polluting California’s natural resources including, but not limited to: drinking water sources; groundwater; surface water in bays, lakes, streams, and rivers; oceans; air; public parks; as well as soils; and fish and wildlife.

445. As a result of Defendants’ misconduct, plastics are polluting “other natural resources” as described in the statute which, “irrespective of ownership contribute, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community.”

446. The pollution, impairment, and destruction of natural resources including water, wildlife, and other natural resources is continuing in nature.

447. The harms caused by Defendants can be equitably remediated because reasonable methods exist for treating, remediating, and/or abating that contamination and its attendant hazards to communities and the environment. In addition, plastic contamination

continues to move and spread throughout California, and plastic pollution levels at any given contamination site fluctuate over time, thus pollution, impairment and destruction are ongoing.

448. Defendants' acts and omissions have caused an indivisible harm in California.

### **THIRD CAUSE OF ACTION**

#### **Water Pollution**

(Fish and Game Code sections 5650 and 5650.1)

449. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

450. Fish and Game Code section 5650, subdivision (a)(6), prohibits any person from depositing in, permitting to pass into, and placing where it can pass into the waters of the State any substance or materials deleterious to fish, plant life, mammals, or bird life.

451. Fish and Game Code section 5650.1 provides for injunctive relief and civil penalties of not more than \$25,000 for each such violation of Fish and Game Code section 5650. Such penalty is in addition to any other civil penalty imposed by law.

452. At all times relevant to this Complaint, Defendants, through their deception, permitted to pass into the waters of the State plastic waste, in violation of Fish and Game Code section 5650, subdivision (a)(6).

453. Defendants, through their deception, continue to permit to pass into the waters of the State plastic waste, in violation of Fish and Game Code section 5650, subdivision (a)(6).

454. Plastic waste is a substance and material deleterious to fish, plant life, mammals, and bird life. At all times relevant to this Complaint, Defendants, through their deception, unlawfully permitted to pass into the waters of the State plastic waste, a substance and material deleterious to fish, plant life, mammals, and bird life, in violation of Fish and Game Code section 5650. Defendants are liable for civil penalties as set forth in Fish and Game Code section 5650.1 for each and every separate violation of any of these provisions of the Fish and Game Code and any permit, rule, regulation, standard, or requirement issued or promulgated pursuant thereto.

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**FOURTH CAUSE OF ACTION**

**Untrue or Misleading Advertising**

(Business and Professions Code section 17500)

455. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

456. Defendants, and each of them, have engaged in and continue to engage in acts or practices that constitute violations of the False Advertising Law, Business and Professions Code section 17500 et seq.

457. Defendants, with the intent to induce members of the public to purchase and utilize plastics products, made or caused to be made and/or disseminated untrue or misleading statements concerning plastics and plastics recycling, which Defendants knew, or by the exercise of reasonable care should have known, were untrue or misleading at the time they were made. Such misrepresentations include, but are not limited to:

- a. That single-use plastic is environmentally beneficial or benign;
- b. That effective techniques exist for recycling plastic;
- c. That the infrastructure, market, and technology for plastic recycling, particularly for single-use plastics, are, or are reasonably expected to become, adequate to address the volume of plastic produced;
- d. That recycling plastic is economically viable;
- e. That products bearing “mass balance” and “certified circular polymer” certificates are “recycled,” “circular,” or environmentally beneficial or benign;
- f. That products contain a particular percentage of recycled material that they do not actually contain;
- g. That “advanced recycling” is new or breakthrough technology;

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- h. That “advanced recycling” is a viable, effective, efficient, or scalable method for reducing plastic waste and pollution.
- i. That plastics do not create environmental hazards or that such hazards are negligible.

## FIFTH CAUSE OF ACTION

### Misleading Environmental Marketing

(Business and Professions Code section 17580.5)

458. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

459. Defendants, and each of them, have made environmental marketing claims that are untruthful, deceptive, and/or misleading, whether explicitly or implicitly, in violation of Business and Professions Code section 17580.5.

460. Such misleading environmental marketing claims include, but are not limited to, such deceptive representations as:

- a. Marketing plastic as infinitely recyclable;
- b. Marketing plastic as universally recyclable and “advanced recycling” as easy and inclusive, when most Californians do not have access to recycling for all products made of plastic and all plastic types;
- c. Marketing plastic, particularly single-use plastic, as sustainable based on its ostensible recyclability;
- d. Marketing chemical processes such as “advanced recycling” or pyrolysis as a legitimate, clean and/or effective plastic recycling process, when in fact the yield of plastic produced from these chemical processes is approximately eight percent;
- e. Marketing chemical processes such “advanced recycling” or pyrolysis as a legitimate effective plastic recycling process, when in fact the process transforms the vast majority of plastic waste into fuel and other non-plastic products and byproducts;

- f. Selling “certified circular polymer” certificates through “advanced recycling” based on a 90 to 100 percent yield, with knowledge that the yield was much lower;
- g. Claiming mass balance and/or free attribution or free allocation is a legitimate approach to claim “certified” “circular polymer credits” and is a legitimate technique for measuring effective recycling, when in fact it primarily produces fuel, which is incinerated, and other non-circular products;
- h. Selling “certified circular polymer” certificates based on false high yields; and
- i. Selling “certified circular polymer” certificates based on equivalency with having a certain amount of recycled or waste plastic content.

## SIXTH CAUSE OF ACTION

### Unfair Competition

(Business and Professions Code section 17200)

461. The people re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

462. Defendants have engaged in and continue to engage in unlawful, unfair, or fraudulent business acts or practices and unfair, deceptive, untrue, or misleading advertising that constitute unfair competition as defined in the Unfair Competition Law, Business and Professions Code section 17200 et seq. These acts or practices include, but are not limited to, the following:

- a. Creating or assisting in the creation of a public nuisance in violation of Civil Code section 3479, as alleged in the First Cause of Action;
- b. Engaging in conduct that caused or contributed to the pollution, impairment, and destruction of natural resources in violation of Government Code section 12607, as alleged in the Second Cause of Action;
- c. Permitting plastic waste to pass into the waters of the State, in violation of Fish and Game Code sections 5650, subdivision (a)(6), and 5650.1, as alleged in the Third Cause of Action;
- d. Disseminating untrue and misleading statements to the public in violation of

Business and Professions Code section 17500, as alleged in the Fourth Cause of Action; and

- e. Making misleading environmental marketing claims in violation of Business and Professions Code section 17580.5, as alleged in the Fifth Cause of Action.
- f. Deceptively promoting the use and consumption of plastics when they knew or should have known that plastics create hazards to communities and the environment, including fragmentation of plastic polymers into microplastics, which leach into air, land, and water.

### PRAYER FOR RELIEF

WHEREFORE, the People respectfully request that the Court enter judgment in favor of the People and against Defendants, as follows:

463. Compelling Defendants to abate the ongoing public nuisance their conduct has created in California, including by establishing and contributing to an abatement fund to pay the costs of such abatement;

464. Preliminary and permanent injunctive relief ordering Defendants to cease and desist any and all deceptive public statements related to its plastic operations, including but not limited to referring to its operations and products by the terms “advanced recycling,” “chemical recycling,” “circular,” “certified circular polymers,” and “recyclable”;

465. Granting any and all temporary and permanent equitable relief and imposing such conditions upon Defendants as are required to protect and/or prevent further pollution, impairment, and destruction of the natural resources of California pursuant to Government Code sections 12607 and 12610;

466. That the Court make such orders or judgments as may be necessary to prevent the use or employment by any Defendant of any practice that constitutes unfair competition or false advertising, under the authority of Business and Professions Code sections 17203 and 17535, respectively;

467. That the Court assess a civil penalty of \$2,500 against each Defendant for each violation of Business and Professions Code section 17200 in an amount according to proof, under

1 the authority of Business and Professions Code section 17206;

2 468. That the Court assess a civil penalty of \$2,500 against each Defendant for each  
3 violation of Business and Professions Code section 17500 in an amount according to proof, under  
4 the authority of Business and Professions Code section 17536;

5 469. In addition to any penalties assessed under Business and Professions Code  
6 sections 17206 and 17536, that the Court assess a civil penalty of \$2,500 against each Defendant  
7 for each violation of Business and Professions Code section 17200 perpetrated against a senior  
8 citizen or disabled person, in an amount according to proof, under the authority of Business and  
9 Professions Code section 17206.1;

10 470. That the Court award disgorgement in an amount according to proof, under the  
11 authority of Government Code section 12527.6;

12 471. Pursuant to Fish and Game Code section 5650.1(e), granting any and all  
13 temporary and permanent equitable relief and imposing such conditions upon Defendants as  
14 required to prevent further violations of Fish and Game Code section 5650;

15 472. Pursuant to Fish and Game Code section 5650.1(a), assessing a civil penalty of  
16 twenty-five thousand dollars (\$25,000) against Defendants for each violation of Fish and Game  
17 Code section 5650, as proved at trial;

18 473. Pursuant to Fish and Game Code section 5650.1, subdivision (i), assessing a  
19 civil penalty of ten dollars (\$10) for each gallon or pound of material discharged;

20 474. Pursuant to Fish and Game Code section 12015, subdivision (a), ordering  
21 Defendants to remove any substance placed in the waters of the State, or to remove any material  
22 threatening to pollute, contaminate, or obstruct waters of the State, which can be removed, that  
23 caused the prohibited condition, or to pay the costs of the removal by the State;

24 475. Pursuant to Fish and Game Code section 12016, subdivision (a), awarding  
25 actual damages to fish, plant, bird, or animal life or their habitat and, in addition, for the  
26 reasonable costs incurred by the State in cleaning up the deleterious substance or material or  
27 abating its effects, or both.

28 476. Pursuant to Code of Civil Procedure section 1021.8, Government Code section

1 12607, Fish and Game Code section 5650.1, and Civil Code section 3494, awarding to the  
2 Attorney General all costs of investigating and prosecuting claims aimed at protecting  
3 California's natural resources, including expert fees, reasonable attorneys' fees, and costs in an  
4 amount according to proof;

5 477. Ordering that the People recover its costs of suit, including costs of  
6 investigation;

7 478. Order that the People receive all other relief that they are legally entitled; and

8 479. Awarding such other relief that the Court deems just, proper, and equitable.

9 **REQUEST FOR JURY TRIAL**

10 The People respectfully request that all issues presented by the above Complaint be tried by  
11 a jury, with the exception of those issues that, by law, must be tried before the Court.

12  
13 Dated: September 23, 2024

Respectfully submitted,

14 ROB BONTA  
15 Attorney General of California  
16 DANIEL A. OLIVAS  
17 Senior Assistant Attorney General  
18 DEBORAH M. SMITH  
19 Supervising Deputy Attorney General



20 JUSTIN J. LEE  
21 Deputy Attorney General  
22 *Attorneys for Plaintiff*  
23 *The People of the State of California, ex rel.*  
24 *Rob Bonta, Attorney General of California*

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CM-010

ATTORNEY OR PARTY WITHOUT ATTORNEY (Name, State Bar number, and address): <b>Justin J. Lee (SBN 307148) - Office of the Attorney General</b> <b>300 S. Spring St., Suite 1702, Los Angeles, CA 90013</b>  TELEPHONE NO.: (213) 269-6692 FAX NO.: (916) 731-2121 EMAIL ADDRESS: Justin.Lee@doj.ca.gov ATTORNEY FOR (Name): The People of the State of CA, ex rel. Rob Bonta, Atty Gen. of CA	<b>FOR COURT USE ONLY</b>  <b>ELECTRONICALLY</b> <b>FILED</b> <i>Superior Court of California,</i> <i>County of San Francisco</i>  <b>09/23/2024</b> <b>Clerk of the Court</b> BY: AUSTIN LAM Deputy Clerk
<b>SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN FRANCISCO</b> STREET ADDRESS: 400 McAllister Street MAILING ADDRESS: 400 McAllister Street CITY AND ZIP CODE: San Francisco 94102 BRANCH NAME: Civic Center Courthouse	CASE NUMBER: <b>CGC-24-618323</b>  JUDGE: DEPT.:
CASE NAME: The People of the State of California, ex rel Rob Bonta, Atty. Gen. of CA v. Exxon Mobil Corp. et al.	
<b>CIVIL CASE COVER SHEET</b> <input checked="" type="checkbox"/> <b>Unlimited</b> (Amount demanded exceeds \$35,000) <input type="checkbox"/> <b>Limited</b> (Amount demanded is \$35,000 or less)	<b>Complex Case Designation</b> <input type="checkbox"/> Counter <input type="checkbox"/> Joinder Filed with first appearance by defendant (Cal. Rules of Court, rule 3.402)

*Items 1–6 below must be completed (see instructions on page 2).*

1. Check <b>one</b> box below for the case type that best describes this case:		
<b>Auto Tort</b> <input type="checkbox"/> Auto (22) <input type="checkbox"/> Uninsured motorist (46) <b>Other PI/PD/WD (Personal Injury/Property Damage/Wrongful Death) Tort</b> <input type="checkbox"/> Asbestos (04) <input type="checkbox"/> Product liability (24) <input type="checkbox"/> Medical malpractice (45) <input type="checkbox"/> Other PI/PD/WD (23) <b>Non-PI/PD/WD (Other) Tort</b> <input type="checkbox"/> Business tort/unfair business practice (07) <input type="checkbox"/> Civil rights (08) <input type="checkbox"/> Defamation (13) <input type="checkbox"/> Fraud (16) <input type="checkbox"/> Intellectual property (19) <input type="checkbox"/> Professional negligence (25) <input type="checkbox"/> Other non-PI/PD/WD tort (35) <b>Employment</b> <input type="checkbox"/> Wrongful termination (36) <input type="checkbox"/> Other employment (15)	<b>Contract</b> <input type="checkbox"/> Breach of contract/warranty (06) <input type="checkbox"/> Rule 3.740 collections (09) <input type="checkbox"/> Other collections (09) <input type="checkbox"/> Insurance coverage (18) <input type="checkbox"/> Other contract (37) <b>Real Property</b> <input type="checkbox"/> Eminent domain/Inverse condemnation (14) <input type="checkbox"/> Wrongful eviction (33) <input type="checkbox"/> Other real property (26) <b>Unlawful Detainer</b> <input type="checkbox"/> Commercial (31) <input type="checkbox"/> Residential (32) <input type="checkbox"/> Drugs (38) <b>Judicial Review</b> <input type="checkbox"/> Asset forfeiture (05) <input type="checkbox"/> Petition re: arbitration award (11) <input type="checkbox"/> Writ of mandate (02) <input type="checkbox"/> Other judicial review (39)	<b>Provisionally Complex Civil Litigation (Cal. Rules of Court, rules 3.400–3.403)</b> <input type="checkbox"/> Antitrust/Trade regulation (03) <input type="checkbox"/> Construction defect (10) <input type="checkbox"/> Mass tort (40) <input type="checkbox"/> Securities litigation (28) <input checked="" type="checkbox"/> Environmental/Toxic tort (30) <input type="checkbox"/> Insurance coverage claims arising from the above listed provisionally complex case types (41) <b>Enforcement of Judgment</b> <input type="checkbox"/> Enforcement of judgment (20) <b>Miscellaneous Civil Complaint</b> <input type="checkbox"/> RICO (27) <input type="checkbox"/> Other complaint (not specified above) (42) <b>Miscellaneous Civil Petition</b> <input type="checkbox"/> Partnership and corporate governance (21) <input type="checkbox"/> Other petition (not specified above) (43)

2. This case ☒ is ☐ is not complex under rule 3.400 of the California Rules of Court. If the case is complex, mark the factors requiring exceptional judicial management:
- |   |   |
|---|---|
| a. <input type="checkbox"/> Large number of separately represented parties  | d. <input checked="" type="checkbox"/> Large number of witnesses  |
| b. <input checked="" type="checkbox"/> Extensive motion practice raising difficult or novel issues that will be time-consuming to resolve | e. <input checked="" type="checkbox"/> Coordination with related actions pending in one or more courts in other counties, states, or countries, or in a federal court |
| c. <input checked="" type="checkbox"/> Substantial amount of documentary evidence   | f. <input type="checkbox"/> Substantial postjudgment judicial supervision   |
3. Remedies sought (check all that apply): a. ☒ monetary b. ☒ nonmonetary; declaratory or injunctive relief c. ☒ punitive
4. Number of causes of action (specify): Six
5. This case ☐ is ☒ is not a class action suit.

6. If there are any known related cases, file and serve a notice of related case. (You may use form CM-015.)

Date: September 23, 2024

Justin J. Lee

(TYPE OR PRINT NAME)

(SIGNATURE OF PARTY OR ATTORNEY FOR PARTY)

#### NOTICE

- Plaintiff must file this cover sheet with the first paper filed in the action or proceeding (except small claims cases or cases filed under the Probate Code, Family Code, or Welfare and Institutions Code). (Cal. Rules of Court, rule 3.220.) Failure to file may result in sanctions.
- File this cover sheet in addition to any cover sheet required by local court rule.
- If this case is complex under rule 3.400 et seq. of the California Rules of Court, you must serve a copy of this cover sheet on all other parties to the action or proceeding.
- Unless this is a collections case under rule 3.740 or a complex case, this cover sheet will be used for statistical purposes only.

Page 1 of 2

**INSTRUCTIONS ON HOW TO COMPLETE THE COVER SHEET****CM-010**

**To Plaintiffs and Others Filing First Papers.** If you are filing a first paper (for example, a complaint) in a civil case, you **must** complete and file, along with your first paper, the Civil Case Cover Sheet contained on page 1. This information will be used to compile statistics about the types and numbers of cases filed. You must complete items 1 through 6 on the sheet. In item 1, you must check **one** box for the case type that best describes the case. If the case fits both a general and a more specific type of case listed in item 1, check the more specific one. If the case has multiple causes of action, check the box that best indicates the **primary** cause of action. To assist you in completing the sheet, examples of the cases that belong under each case type in item 1 are provided below. A cover sheet must be filed only with your initial paper. Failure to file a cover sheet with the first paper filed in a civil case may subject a party, its counsel, or both to sanctions under rules 2.30 and 3.220 of the California Rules of Court.

**To Parties in Rule 3.740 Collections Cases.** A "collections case" under rule 3.740 is defined as an action for recovery of money owed in a sum stated to be certain that is not more than \$25,000, exclusive of interest and attorney's fees, arising from a transaction in which property, services, or money was acquired on credit. A collections case does not include an action seeking the following: (1) tort damages, (2) punitive damages, (3) recovery of real property, (4) recovery of personal property, or (5) a prejudgment writ of attachment. The identification of a case as a rule 3.740 collections case on this form means that it will be exempt from the general time-for-service requirements and case management rules, unless a defendant files a responsive pleading. A rule 3.740 collections case will be subject to the requirements for service and obtaining a judgment in rule 3.740.

**To Parties in Complex Cases.** In complex cases only, parties must also use the Civil Case Cover Sheet to designate whether the case is complex. If a plaintiff believes the case is complex under rule 3.400 of the California Rules of Court, this must be indicated by completing the appropriate boxes in items 1 and 2. If a plaintiff designates a case as complex, the cover sheet must be served with the complaint on all parties to the action. A defendant may file and serve no later than the time of its first appearance a joinder in the plaintiff's designation, a counter-designation that the case is not complex, or, if the plaintiff has made no designation, a designation that the case is complex.

**CASE TYPES AND EXAMPLES****Auto Tort**

Auto (22)–Personal Injury/Property Damage/Wrongful Death  
Uninsured Motorist (46) (*if the case involves an uninsured motorist claim subject to arbitration, check this item instead of Auto*)

**Other PI/PD/WD (Personal Injury/Property Damage/Wrongful Death) Tort**

Asbestos (04)  
Asbestos Property Damage  
Asbestos Personal Injury/Wrongful Death  
Product Liability (*not asbestos or toxic/environmental*) (24)  
Medical Malpractice (45)  
Medical Malpractice–Physicians & Surgeons  
Other Professional Health Care Malpractice  
Other PI/PD/WD (23)  
Premises Liability (e.g., slip and fall)  
Intentional Bodily Injury/PD/WD (e.g., assault, vandalism)  
Intentional Infliction of Emotional Distress  
Negligent Infliction of Emotional Distress  
Other PI/PD/WD

**Non-PI/PD/WD (Other) Tort**

Business Tort/Unfair Business Practice (07)  
Civil Rights (e.g., discrimination, false arrest) (*not civil harassment*) (08)  
Defamation (e.g., slander, libel) (13)  
Fraud (16)  
Intellectual Property (19)  
Professional Negligence (25)  
Legal Malpractice  
Other Professional Malpractice (*not medical or legal*)  
Other Non-PI/PD/WD Tort (35)

**Employment**

Wrongful Termination (36)  
Other Employment (15)

**Contract**

Breach of Contract/Warranty (06)  
Breach of Rental/Lease  
Contract (*not unlawful detainer or wrongful eviction*)  
Contract/Warranty Breach–Seller Plaintiff (*not fraud or negligence*)  
Negligent Breach of Contract/Warranty  
Other Breach of Contract/Warranty  
Collections (e.g., money owed, open book accounts) (09)  
Collection Case–Seller Plaintiff  
Other Promissory Note/Collections Case  
Insurance Coverage (*not provisionally complex*) (18)  
Auto Subrogation  
Other Coverage  
Other Contract (37)  
Contractual Fraud  
Other Contract Dispute

**Real Property**

Eminent Domain/Inverse Condemnation (14)  
Wrongful Eviction (33)  
Other Real Property (e.g., quiet title) (26)  
Writ of Possession of Real Property  
Mortgage Foreclosure  
Quiet Title  
Other Real Property (*not eminent domain, landlord/tenant, or foreclosure*)

**Unlawful Detainer**

Commercial (31)  
Residential (32)  
Drugs (38) (*if the case involves illegal drugs, check this item; otherwise, report as Commercial or Residential*)

**Judicial Review**

Asset Forfeiture (05)  
Petition Re: Arbitration Award (11)  
Writ of Mandate (02)  
Writ–Administrative Mandamus  
Writ–Mandamus on Limited Court Case Matter  
Writ–Other Limited Court Case Review  
Other Judicial Review (39)  
Review of Health Officer Order  
Notice of Appeal–Labor Commissioner  
Appeals

**Provisionally Complex Civil Litigation (Cal. Rules of Court Rules 3.400–3.403)**

Antitrust/Trade Regulation (03)  
Construction Defect (10)  
Claims Involving Mass Tort (40)  
Securities Litigation (28)  
Environmental/Toxic Tort (30)  
Insurance Coverage Claims (*arising from provisionally complex case type listed above*) (41)

**Enforcement of Judgment**

Enforcement of Judgment (20)  
Abstract of Judgment (Out of County)  
Confession of Judgment (*non-domestic relations*)  
Sister State Judgment  
Administrative Agency Award (*not unpaid taxes*)  
Petition/Certification of Entry of Judgment on Unpaid Taxes  
Other Enforcement of Judgment Case

**Miscellaneous Civil Complaint**

RICO (27)  
Other Complaint (*not specified above*) (42)  
Declaratory Relief Only  
Injunctive Relief Only (*non-harassment*)  
Mechanics Lien  
Other Commercial Complaint Case (*non-tort/non-complex*)  
Other Civil Complaint (*non-tort/non-complex*)

**Miscellaneous Civil Petition**

Partnership and Corporate Governance (21)  
Other Petition (*not specified above*) (43)  
Civil Harassment  
Workplace Violence  
Elder/Dependent Adult Abuse  
Election Contest  
Petition for Name Change  
Petition for Relief From Late Claim  
Other Civil Petition

ROB BONTA  
Attorney General of California  
DANIEL A. OLIVAS (SBN 130405)  
Senior Assistant Attorney General  
DEBORAH M. SMITH (SBN 208960)  
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[Gabriel.Martinez@doj.ca.gov](mailto:Gabriel.Martinez@doj.ca.gov)

*Attorneys for Plaintiff, People of the State of  
California, ex rel. Rob Bonta, Attorney General of  
California*

ELECTRONICALLY  
**FILED**

*Superior Court of California,  
County of San Francisco*

**09/23/2024**  
**Clerk of the Court**

BY: AUSTIN LAM  
Deputy Clerk

**FILING FEES EXEMPT  
PURSUANT TO GOV. CODE § 6103**

**CGC-24-618323**

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

**THE PEOPLE OF THE STATE OF  
CALIFORNIA, ex rel. ROB BONTA,  
ATTORNEY GENERAL OF  
CALIFORNIA,**

Plaintiff,

**v.**

**EXXON MOBIL CORPORATION; AND  
DOES 1 THROUGH 100, INCLUSIVE,**

Defendants.

Case No.

**PLAINTIFF'S NOTICE OF  
APPLICATION AND APPLICATION TO  
DESIGNATE CIVIL ACTION AS  
COMPLEX CASE**

**(Cal. Rules of Court, rule 3.400 and Local  
Rule 3.5(c))**

Action Filed: September 23, 2024

**NOTICE**

**TO ALL PARTIES AND THEIR COUNSEL OF RECORD:**

**PLEASE TAKE NOTICE THAT**, pursuant to California Rules of Court, rule 3.403, and San Francisco Superior Court Local Rule 3.5(C), the People of the State of California by and through the Attorney General, Rob Bonta (People), seek an order from this Court declaring that the above-captioned civil action is a complex case within the meaning of California Rules of Court, rule 3.400, and assigning this case to the Complex Litigation Department for all purposes. The People's application is made on the grounds that this case will require exceptional judicial management to avoid placing unnecessary burdens on the Court or the litigants, to expedite the case and keep costs reasonable, and to promote effective decision making by the Court, the parties, and counsel. (Cal. Rules of Court, rule 3400(a).) The People's application is based on this Notice, the following Application, and on the pleadings filed in the action to date. Attached to this Notice and Application as Exhibit A is a copy of the Civil Case Cover Sheet filed by the People with the Complaint. Attached as Exhibit B is a copy of the People's Complaint.

Dated: September 23, 2024

Respectfully submitted,

ROB BONTA  
Attorney General of California  
DANIEL A. OLIVAS  
Senior Assistant Attorney General  
DEBORAH M. SMITH  
Supervising Deputy Attorney General



JUSTIN J. LEE  
Deputy Attorney General  
*Attorneys for Plaintiff*  
*The People of the State of California, ex rel.*  
*Rob Bonta, Attorney General of California*

## APPLICATION

### I. INTRODUCTION

The Attorney General has sued ExxonMobil Corporation (“ExxonMobil”) and Does 1-100 (collectively, Defendants) to address the growing and unprecedented consequences of Defendants’ campaigns to deceive the public about the harmful consequences of their products and their role in causing and exacerbating the plastics pollution crisis in California. The People bring this action against ExxonMobil and Does 1-100 for abatement, equitable relief, and civil penalties. Altogether, Defendants created, contributed to, and/or assisted in the creation of plastics-related harms, which have interfered with rights common to the California public, including, but not limited to, the California environment, California wildlife, and public enjoyment of state lands. (Complaint ¶¶ 352-423, *People of the State of California v. Exxon Mobil Corp. et al.*, San Francisco Superior Court [Compl.].) Because these claims will require exceptional judicial management, the People ask this Court to determine that the action is a complex case under California Rules of Court, rule 3.400, and to assign the case to the Court’s Complex Litigation Department.

### II. FACTUAL AND PROCEDURAL BACKGROUND

The People filed this action on September 23, 2024. The Complaint alleges that Defendants have created, caused, contributed to, and assisted in creating harmful plastic pollution throughout California, which threatens and harms the environment and wildlife. (Compl. ¶¶ 352-423.) Defendants caused these harms by (1) promoting and vastly increasing the production of single-use plastic, while (2) deceptively promising that recycling would take care of the consequent tremendous increase in plastic waste, and (3) while knowing that increasing plastic waste inevitably leads to increasing plastic pollution and (4) knowing that once plastic enters the environment, it leads to harms to the environment and communities. Because of Defendants’ acts and omissions, Californians have sustained and will sustain the loss of use and enjoyment of natural resources and obstruction to the free use of public property. Californians have been required and will be required to spend billions of dollars to address and abate the plastic waste and pollution crisis. (*Id.* ¶¶ 352-423.)

### III. ARGUMENT

This action is provisionally deemed to be complex under California Rules of Court, rule 3.400(c)(4), because it raises environmental claims and may involve many parties. As discussed below, the case should be deemed “complex” under rule 3.400, subdivision (a), because it will require “exceptional judicial management to avoid placing unnecessary burdens on the court or the litigants and to expedite the case[s], keep costs reasonable, and promote effective decision making by the court, the parties, and counsel.” (*Ibid.*) The case is likely to involve numerous pretrial motions raising complex issues that will be time consuming to resolve, management of a large number of witnesses and a substantial amount of documentary evidence, and coordination with related actions. (See Cal. Rules of Court, rule 3.400, subd. (b).)

**Numerous pretrial motions that will be time-consuming to resolve.** The case is likely to involve numerous pretrial motions raising complex issues that will be time-consuming to resolve, management of a large number of witnesses, and a substantial amount of documentary evidence, and coordination with related actions. (Cal. Rules of Court, rule 3.400, subd. (b).) Related actions already exist, including two lawsuits filed by trade groups (of which ExxonMobil is a member) in federal court and two petitions to enforce administrative subpoenas filed by the People against these same entities.<sup>1</sup> Discovery is anticipated to be time consuming and require additional motion practice. The likely volume of pretrial motion practice in this case warrants complex designation. (Cal. Rules of Court, rule 3.400, subd. (b)(1).)

**Large number of witnesses and substantial amount of documentary evidence.** Resolution of the People’s claims will require management of numerous factual and expert witnesses, and a significant volume of documentary evidence. ExxonMobil is a large corporation with numerous employees involved in the events at issue. As set forth in the Complaint, the People allege that oil and gas executives have known for decades that plastic recycling would not address the plastic waste and pollution crisis, but they kept that information

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<sup>1</sup> See *American Chemistry Council v. Rob Bonta*, U.S. Dist. Ct., D.C., No. 24-CV-01533; *Plastics Industry Association v. Rob Bonta*, U.S. Dist. Ct., D.C., No. 24-CV-01542; *People v. American Chemistry Council*, Sac. Sup. Ct., No. 24CV010509; *People v. Plastics Industry Association*, Sac. Sup. Ct., No. 24CV010508.

1 from the public and policymakers, instead actively promoting disinformation on the topic.  
 2 Defendants' deception caused a delayed societal response to plastic waste and pollution. And  
 3 their misconduct has resulted in tremendous costs to California's people, property, and natural  
 4 resources, costs that continue to mount each day. (Compl. ¶¶ 352-423.) In addition, the scientific  
 5 issues in the case will entail a substantial number of expert witnesses. These facts warrant a  
 6 complex designation. (Cal. Rules of Court, rule 3.400, subd. (b)(2).)

7 **Multiple separately represented parties.** The case charges Does 1-100, and may involve  
 8 separately represented parties. This factor weighs in favor of complex designation. (Cal. Rules of  
 9 Court, rule 3.400, subd. (b)(3).)

10 **Coordination with actions in one or more courts in other California counties.** In  
 11 addition to this case filed by the People, a group of non-governmental organizations, including  
 12 the Surfrider Foundation, Sierra Club, Heal the Bay, and San Francisco Baykeeper, have also  
 13 filed a separate lawsuit (hereafter "NGO case") in San Francisco Superior Court, alleging that  
 14 ExxonMobil and others created and contributed to California's plastic waste and pollution crisis.  
 15 The NGO case brings a common core of claims, raises numerous common questions of law, and  
 16 will involve overlapping discovery from Defendants. (Code Civ. Proc., § 404.) In a similar  
 17 context, the climate deception case filed by the California Attorney General, as well as a separate  
 18 climate deception case filed by the City Attorney of San Francisco, were deemed complex by this  
 19 Court. (*People of the State of California ex rel. Rob Bonta, Attorney General of California v.*  
 20 *ExxonMobil Corp., et al.*, S.F. Super. Ct., Case No. CGC-23-609134; *People of the State of*  
 21 *California ex rel. Dennis J. Herrera, San Francisco City Attorney v. BP P.L.C., et al.*, S.F. Super.  
 22 Ct., No. CGC-17-561370.)

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1 **IV. CONCLUSION**

2 The People's action will require special judicial management to avoid unnecessary  
3 burdens on the Court, minimize costs to the parties, and promote effective decision-making. The  
4 People, therefore, ask the Court to designate this case as complex under California Rules of  
5 Court, rule 3.400.

6  
7 Dated: September 23, 2024

Respectfully submitted,

8 ROB BONTA  
9 Attorney General of California  
10 DANIEL A. OLIVAS  
11 Senior Assistant Attorney General  
12 DEBORAH M. SMITH  
13 Supervising Deputy Attorney General

14   
15 JUSTIN J. LEE  
16 Deputy Attorney General  
17 *Attorneys for Plaintiff*  
18 *The People of the State of California, ex rel.*  
19 *Rob Bonta, Attorney General of California*  
20  
21  
22  
23  
24  
25  
26  
27  
28

# **EXHIBIT A**

CM-010

ATTORNEY OR PARTY WITHOUT ATTORNEY (Name, State Bar number, and address): <b>Justin J. Lee (SBN 307148) - Office of the Attorney General</b> <b>300 S. Spring St., Suite 1702, Los Angeles, CA 90013</b>  TELEPHONE NO.: (213) 269-6692 FAX NO.: (916) 731-2121 EMAIL ADDRESS: Justin.Lee@doj.ca.gov ATTORNEY FOR (Name): The People of the State of CA, ex rel. Rob Bonta, Atty Gen. of CA	<b>FOR COURT USE ONLY</b>				
<b>SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN FRANCISCO</b> STREET ADDRESS: 400 McAllister Street MAILING ADDRESS: 400 McAllister Street CITY AND ZIP CODE: San Francisco 94102 BRANCH NAME: Civic Center Courthouse					
CASE NAME: The People of the State of California, ex rel Rob Bonta, Atty. Gen. of CA v. Exxon Mobil Corp. et al.					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>CIVIL CASE COVER SHEET</b>  <input checked="" type="checkbox"/> <b>Unlimited</b>            (Amount demanded exceeds \$35,000)         </td> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> <b>Limited</b>            (Amount demanded is \$35,000 or less)         </td> </tr> </table>	<b>CIVIL CASE COVER SHEET</b> <input checked="" type="checkbox"/> <b>Unlimited</b> (Amount demanded exceeds \$35,000)	<input type="checkbox"/> <b>Limited</b> (Amount demanded is \$35,000 or less)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>Complex Case Designation</b>  <input type="checkbox"/> Counter <input type="checkbox"/> Joinder            Filed with first appearance by defendant (Cal. Rules of Court, rule 3.402)         </td> <td style="width: 50%; padding: 5px;">           CASE NUMBER:             JUDGE:            DEPT.:         </td> </tr> </table>	<b>Complex Case Designation</b> <input type="checkbox"/> Counter <input type="checkbox"/> Joinder Filed with first appearance by defendant (Cal. Rules of Court, rule 3.402)	CASE NUMBER:  JUDGE: DEPT.:
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2. This case ☒ is ☐ is not complex under rule 3.400 of the California Rules of Court. If the case is complex, mark the factors requiring exceptional judicial management:
- |   |   |
|---|---|
| a. <input type="checkbox"/> Large number of separately represented parties  | d. <input checked="" type="checkbox"/> Large number of witnesses  |
| b. <input checked="" type="checkbox"/> Extensive motion practice raising difficult or novel issues that will be time-consuming to resolve | e. <input checked="" type="checkbox"/> Coordination with related actions pending in one or more courts in other counties, states, or countries, or in a federal court |
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3. Remedies sought (*check all that apply*): a. ☒ monetary b. ☒ nonmonetary; declaratory or injunctive relief c. ☒ punitive
4. Number of causes of action (*specify*): Six
5. This case ☐ is ☒ is not a class action suit.

6. If there are any known related cases, file and serve a notice of related case. (*You may use form CM-015.*)

Date: September 23, 2024

Justin J. Lee

(TYPE OR PRINT NAME)

  
 (SIGNATURE OF PARTY OR ATTORNEY FOR PARTY)

#### NOTICE

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Page 1 of 2

**INSTRUCTIONS ON HOW TO COMPLETE THE COVER SHEET****CM-010**

**To Plaintiffs and Others Filing First Papers.** If you are filing a first paper (for example, a complaint) in a civil case, you **must** complete and file, along with your first paper, the Civil Case Cover Sheet contained on page 1. This information will be used to compile statistics about the types and numbers of cases filed. You must complete items 1 through 6 on the sheet. In item 1, you must check **one** box for the case type that best describes the case. If the case fits both a general and a more specific type of case listed in item 1, check the more specific one. If the case has multiple causes of action, check the box that best indicates the **primary** cause of action. To assist you in completing the sheet, examples of the cases that belong under each case type in item 1 are provided below. A cover sheet must be filed only with your initial paper. Failure to file a cover sheet with the first paper filed in a civil case may subject a party, its counsel, or both to sanctions under rules 2.30 and 3.220 of the California Rules of Court.

**To Parties in Rule 3.740 Collections Cases.** A "collections case" under rule 3.740 is defined as an action for recovery of money owed in a sum stated to be certain that is not more than \$25,000, exclusive of interest and attorney's fees, arising from a transaction in which property, services, or money was acquired on credit. A collections case does not include an action seeking the following: (1) tort damages, (2) punitive damages, (3) recovery of real property, (4) recovery of personal property, or (5) a prejudgment writ of attachment. The identification of a case as a rule 3.740 collections case on this form means that it will be exempt from the general time-for-service requirements and case management rules, unless a defendant files a responsive pleading. A rule 3.740 collections case will be subject to the requirements for service and obtaining a judgment in rule 3.740.

**To Parties in Complex Cases.** In complex cases only, parties must also use the Civil Case Cover Sheet to designate whether the case is complex. If a plaintiff believes the case is complex under rule 3.400 of the California Rules of Court, this must be indicated by completing the appropriate boxes in items 1 and 2. If a plaintiff designates a case as complex, the cover sheet must be served with the complaint on all parties to the action. A defendant may file and serve no later than the time of its first appearance a joinder in the plaintiff's designation, a counter-designation that the case is not complex, or, if the plaintiff has made no designation, a designation that the case is complex.

**CASE TYPES AND EXAMPLES****Auto Tort**

Auto (22)–Personal Injury/Property Damage/Wrongful Death  
Uninsured Motorist (46) (*if the case involves an uninsured motorist claim subject to arbitration, check this item instead of Auto*)

**Other PI/PD/WD (Personal Injury/Property Damage/Wrongful Death) Tort**

Asbestos (04)  
Asbestos Property Damage  
Asbestos Personal Injury/Wrongful Death  
Product Liability (*not asbestos or toxic/environmental*) (24)  
Medical Malpractice (45)  
Medical Malpractice–Physicians & Surgeons  
Other Professional Health Care Malpractice  
Other PI/PD/WD (23)  
Premises Liability (e.g., slip and fall)  
Intentional Bodily Injury/PD/WD (e.g., assault, vandalism)  
Intentional Infliction of Emotional Distress  
Negligent Infliction of Emotional Distress  
Other PI/PD/WD

**Non-PI/PD/WD (Other) Tort**

Business Tort/Unfair Business Practice (07)  
Civil Rights (e.g., discrimination, false arrest) (*not civil harassment*) (08)  
Defamation (e.g., slander, libel) (13)  
Fraud (16)  
Intellectual Property (19)  
Professional Negligence (25)  
Legal Malpractice  
Other Professional Malpractice (*not medical or legal*)  
Other Non-PI/PD/WD Tort (35)

**Employment**

Wrongful Termination (36)  
Other Employment (15)

**Contract**

Breach of Contract/Warranty (06)  
Breach of Rental/Lease  
Contract (*not unlawful detainer or wrongful eviction*)  
Contract/Warranty Breach–Seller Plaintiff (*not fraud or negligence*)  
Negligent Breach of Contract/Warranty  
Other Breach of Contract/Warranty  
Collections (e.g., money owed, open book accounts) (09)  
Collection Case–Seller Plaintiff  
Other Promissory Note/Collections Case  
Insurance Coverage (*not provisionally complex*) (18)  
Auto Subrogation  
Other Coverage  
Other Contract (37)  
Contractual Fraud  
Other Contract Dispute

**Real Property**

Eminent Domain/Inverse Condemnation (14)  
Wrongful Eviction (33)  
Other Real Property (e.g., quiet title) (26)  
Writ of Possession of Real Property  
Mortgage Foreclosure  
Quiet Title  
Other Real Property (*not eminent domain, landlord/tenant, or foreclosure*)

**Unlawful Detainer**

Commercial (31)  
Residential (32)  
Drugs (38) (*if the case involves illegal drugs, check this item; otherwise, report as Commercial or Residential*)

**Judicial Review**

Asset Forfeiture (05)  
Petition Re: Arbitration Award (11)  
Writ of Mandate (02)  
Writ–Administrative Mandamus  
Writ–Mandamus on Limited Court Case Matter  
Writ–Other Limited Court Case Review  
Other Judicial Review (39)  
Review of Health Officer Order  
Notice of Appeal–Labor Commissioner  
Appeals

**Provisionally Complex Civil Litigation (Cal. Rules of Court Rules 3.400–3.403)**

Antitrust/Trade Regulation (03)  
Construction Defect (10)  
Claims Involving Mass Tort (40)  
Securities Litigation (28)  
Environmental/Toxic Tort (30)  
Insurance Coverage Claims  
(*arising from provisionally complex case type listed above*) (41)

**Enforcement of Judgment**

Enforcement of Judgment (20)  
Abstract of Judgment (Out of County)  
Confession of Judgment (*non-domestic relations*)  
Sister State Judgment  
Administrative Agency Award  
(*not unpaid taxes*)  
Petition/Certification of Entry of Judgment on Unpaid Taxes  
Other Enforcement of Judgment Case

**Miscellaneous Civil Complaint**

RICO (27)  
Other Complaint (*not specified above*) (42)  
Declaratory Relief Only  
Injunctive Relief Only (*non-harassment*)  
Mechanics Lien  
Other Commercial Complaint  
Case (*non-tort/non-complex*)  
Other Civil Complaint  
(*non-tort/non-complex*)

**Miscellaneous Civil Petition**

Partnership and Corporate Governance (21)  
Other Petition (*not specified above*) (43)  
Civil Harassment  
Workplace Violence  
Elder/Dependent Adult Abuse  
Election Contest  
Petition for Name Change  
Petition for Relief From Late Claim  
Other Civil Petition

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**FILING FEES EXEMPT  
PURSUANT TO GOV. CODE § 6103**

13 SUPERIOR COURT OF THE STATE OF CALIFORNIA

14 COUNTY OF SAN FRANCISCO

15  
16 **THE PEOPLE OF THE STATE OF**  
17 **CALIFORNIA, ex rel. ROB BONTA,**  
18 **ATTORNEY GENERAL OF**  
**CALIFORNIA,**

19 Plaintiff,

20 v.

21  
22 **EXXON MOBIL CORPORATION; AND**  
23 **DOES 1 THROUGH 100, INCLUSIVE,**

24 Defendants.  
25  
26  
27  
28

Case No.

**COMPLAINT FOR ABATEMENT,  
EQUITABLE RELIEF, AND CIVIL  
PENALTIES; PRELIMINARY AND  
PERMANENT INJUNCTION**

**JURY TRIAL DEMANDED**

- (1) PUBLIC NUISANCE;  
(2) GOVERNMENT CODE SECTION 12607;  
(3) WATER POLLUTION;  
(4) UNTRUE OR MISLEADING ADVERTISING;  
(5) MISLEADING ENVIRONMENTAL MARKETING; AND  
(6) UNLAWFUL, UNFAIR, OR FRAUDULENT BUSINESS PRACTICES.

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1 The People of the State of California, by and through Attorney General Rob Bonta, for the  
 2 protection of the State's<sup>1</sup> natural resources and residents, allege<sup>2</sup> as follows:

### 3 INTRODUCTION

4 1. The plastics industry, through its deceptive public messaging regarding plastic  
 5 recycling, is responsible for one of the most devastating global environmental crises of our time:  
 6 the plastic waste and pollution crisis.

7 2. ExxonMobil, the largest producer of plastic polymers used to manufacture  
 8 single-use plastics, caused or substantially contributed to the deluge of plastic pollution that has  
 9 harmed and continues to harm California's environment, wildlife, natural resources, and people.  
 10 ExxonMobil not only promotes and produces the largest amount of plastic that becomes plastic  
 11 waste in California, it has also deceived Californians for almost half a century by promising that  
 12 recycling could and would solve the ever-growing plastic waste crisis. All the while, ExxonMobil  
 13 has known that mechanical recycling, and now "advanced recycling," will never be able to  
 14 process more than a tiny fraction of the plastic waste it produces.

15 3. Even as it ramped up plastic production and deceptively promoted recycling as  
 16 a cure-all for plastic waste, ExxonMobil knew that the consequent amount of plastic waste would  
 17 continue to rise, inevitably leading to ever-increasing plastic pollution of the environment,  
 18 harming California's iconic coastlines, waterways, wildlife, and residents. ExxonMobil knew that  
 19 once plastic enters the environment it is extremely costly and difficult to eradicate and that plastic  
 20 predictably disintegrates into microplastics—tiny plastic bits measuring five millimeters or less—  
 21 which pose an even greater threat of harm to the environment and all living things, including  
 22 human bodies. For decades, ExxonMobil has dumped the cleanup and environmental costs of its  
 23 plastic production on the public, and Californians are paying the price.

24 ///

25 \_\_\_\_\_  
 26 <sup>1</sup> In this Complaint, the term "State" refers to the State of California, unless otherwise  
 27 stated. The term "California" refers to the area falling within the State's geographic boundaries,  
 28 unless otherwise stated. The State expressly disclaims injuries arising on federal land and tribal  
 lands held in trust by the United States and does not seek recovery or relief attributable to these  
 injuries.

<sup>2</sup> The allegations herein are based on information and belief unless otherwise indicated.

1           4.           Plastics are made from fossil fuels like natural gas or petroleum. ExxonMobil,  
2 one of the world's largest oil and gas companies, provides fossil fuel inputs for plastic production.  
3 As a vertically integrated company, ExxonMobil also has a chemical division that converts its  
4 fossil fuels into plastic monomers and polymers, such as ethylene, propylene, polyethylene, and  
5 polypropylene, which are commonly made into consumer products and packaging, including  
6 single-use plastics (i.e., use once and dispose). Those consumer products include plastic bottles,  
7 bags, snack wrappers, straws, cups, balloons, and other products that become plastic waste and  
8 plastic pollution in California and elsewhere. ExxonMobil stands at the top of the plastic-  
9 production pyramid, as the world's largest producer of single-use plastic polymers, and  
10 ExxonMobil continues to grow its plastics production—guaranteeing the plastic waste and  
11 pollution crisis will continue to grow.

12           5.           As a leader in the plastics industry, ExxonMobil has aggressively promoted the  
13 development of fossil-fuel-based plastic products and campaigned to minimize the public's  
14 understanding of the harmful consequences of these products. It has sought to convince the public  
15 through a decades-long campaign of deception that recycling is the solution to plastic waste,  
16 despite knowing full well that the infrastructure, market, and technology for plastic recycling,  
17 particularly for single-use plastics, are woefully inadequate for the volume of plastic ExxonMobil  
18 produces, and that it is technically and economically nonviable to handle the amount of plastic  
19 waste it produces. This campaign of deception continues to this day.

20           6.           ExxonMobil's deceptive statements were designed to mislead consumers and  
21 the public—including the State, its businesses, and its residents—about the serious adverse  
22 consequences that would foreseeably result from continued and increased production of plastic  
23 products. ExxonMobil's deceptions undermined consumers' ability to make informed choices to  
24 avoid the catastrophic harms we are experiencing. Globally, and in California, single-use plastic  
25 chokes our waterways, poisons our oceans, harms already endangered and threatened wildlife,  
26 blights our landscapes, contaminates the recycling stream, increases waste management costs,  
27 pollutes our drinking water, and expands landfills. While pushing the costs of these harms onto  
28 Californians and inflicting environmental injustices on the State's most vulnerable communities,

ExxonMobil's deception has allowed it to continue to profitably and rapidly grow its single-use plastic production business.

7. ExxonMobil must be held accountable for its actions.

## **PARTIES**

### **I. PLAINTIFF.**

8. Plaintiff is the People of the State of California. This civil enforcement action is prosecuted on behalf of the People by and through Rob Bonta, Attorney General of California, under the Attorney General's broad independent powers to enforce state laws (Cal. Const. art. V, § 13), and pursuant to Government Code section 12600 et seq.; Fish and Game Code sections 5650.1 and 5650; Civil Code sections 3479, 3480, 3491, and 3494; Business and Professions Code section 17203, 17204, 17206, 17535, and 17536; and Code of Civil Procedure sections 731 and 1021.8.

### **II. DEFENDANT EXXONMOBIL.**

#### **A. ExxonMobil's Corporate Structure.**

9. Defendant Exxon Mobil Corporation is a New Jersey corporation headquartered in Spring, Texas, and has been registered to do business in California since 1972. Exxon Mobil Corporation is a multinational, vertically integrated energy and chemical company and one of the largest publicly traded international oil and gas companies in the world. Exxon Mobil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Exxon Corporation; ExxonMobil Refining and Supply Company; Exxon Chemical U.S.A.; ExxonMobil Chemical Corporation; ExxonMobil Chemical U.S.A.; ExxonMobil Refining & Supply Corporation; Exxon Company, U.S.A.; Standard Oil Company of New Jersey; and Mobil Corporation. On November 30, 1999, Exxon and Mobil merged to form Exxon Mobil Corporation.

10. ExxonMobil Chemical Company and ExxonMobil Product Solutions Company are divisions within Exxon Mobil Corporation, act on Exxon Mobil Corporation's behalf, and are subject to Exxon Mobil Corporation's control.

11. Defendant Exxon Mobil Corporation, including ExxonMobil Chemical

1 Company, ExxonMobil Product Solutions, and any predecessors, successors, parents,  
2 subsidiaries, affiliates, and divisions, are collectively referred to herein as “ExxonMobil.”

3 12. When this Complaint references an act or omission of ExxonMobil, unless  
4 specifically attributed or otherwise stated, such references mean that the officers, directors,  
5 agents, employees, or representatives of ExxonMobil committed or authorized such an act or  
6 omission, or failed to adequately supervise or properly control or direct their employees while  
7 engaged in the management, direction, operation or control of the affairs of ExxonMobil, and did  
8 so while acting within the scope of their employment or agency.

9 13. ExxonMobil’s Board holds the highest level of direct responsibility for policy  
10 within the company. ExxonMobil’s Chairman of the Board and Chief Executive Officer, its  
11 President, and the other members of its Management Committee have been actively engaged in  
12 discussions relating to plastics and the risks of plastic waste and pollution on an ongoing basis,  
13 and continue to actively promote the false narrative that recycling can solve plastic waste. The  
14 Board opposed a 2022 shareholder proposal to issue a report on how reducing virgin plastic  
15 production to reduce ocean plastic pollution would affect ExxonMobil’s financial position. The  
16 Board opposed a similar shareholder proposal in 2023, stating that proponents of the study  
17 wrongly concluded that solutions to plastic waste include “reduced use of plastics,” arguing that  
18 the proposal “understates the potential of recycling, particularly advanced recycling” to address  
19 plastic waste, and claiming that ExxonMobil can “address plastic waste in the environment while  
20 driving new economic growth in the United States through recycling—an important ‘win-win’  
21 that is achievable.”

22 **B. ExxonMobil’s Segments and Divisions.**

23 14. Exxon Mobil Corporation consists of numerous segments, divisions, and  
24 affiliates in all areas of the fossil fuel, petrochemical, and plastics industries with names that  
25 include ExxonMobil, Exxon, Esso, Mobil or XTO. ExxonMobil has an integrated business model  
26 “involving exploration for, and production of, crude oil and natural gas; manufacture, trade,  
27 transport and sale of crude oil, natural gas, petroleum products, petrochemicals, and a wide  
28 variety of specialty products.” This integration is clear from its SEC filings, where ExxonMobil

1 includes in its reportable segments Upstream (oil and gas), Energy Products (fuels), Chemical  
2 Products (plastics petrochemicals), and Specialty Products (lubricants).

3 15. ExxonMobil controls and has controlled company-wide decisions, including  
4 those of its various segments and divisions, about the quantity and extent of production of  
5 products and sales of products. ExxonMobil represents that its success, including its “ability to  
6 mitigate risk and provide attractive returns to shareholders, depends on [its] ability to successfully  
7 manage [its] overall portfolio, including diversification among types and locations of [its]  
8 projects, products produced, and strategies to divest assets.” ExxonMobil determines whether and  
9 to what extent its segments and divisions market, produce, and/or distribute products, including  
10 petrochemical products used to produce plastics, such as ethylene, polyethylene, and  
11 polypropylene, and products made from “advanced recycling,” such as “certified circular  
12 polymers.”

13 16. ExxonMobil controls and has controlled company-wide decisions, including  
14 those of its segments and divisions, related to marketing, advertising, and communications  
15 strategies concerning plastics and the relationship between plastics, recycling, and plastic-related  
16 impacts on the environment and humans.

17 **III. DEFENDANT DOES 1 THROUGH 100.**

18 17. Plaintiff is not aware of the true names and capacities of defendants sued herein  
19 as DOES 1 through 100, inclusive, and therefore sues those defendants by fictitious names. Each  
20 fictitiously named Defendant is responsible in some manner for the violations of law  
21 alleged. Plaintiff will amend this Complaint to add the true names of the fictitiously named  
22 defendants once they are discovered. Whenever reference is made in this Complaint to  
23 “Defendants” or “ExxonMobil,” such reference shall include DOES 1 through 100 as well as the  
24 named defendants.

25 18. At all relevant times, each Defendant acted as a principal, under express or  
26 implied agency, and/or with actual or ostensible authority to perform the acts alleged in this  
27 Complaint on behalf of every other named Defendant. At all relevant times, some or all  
28 Defendants acted as the agent of the others, and all Defendants acted within the scope of their

1 agency if acting as an agent of another.

2 19. At all relevant times, each Defendant knew or should have known that the other  
3 Defendants were engaging in or planned to engage in the violations of law alleged in this  
4 Complaint. Knowing that the other Defendants were engaging in such unlawful conduct, each  
5 Defendant nevertheless facilitated the commission of those unlawful acts. Each Defendant  
6 intended to and did encourage, facilitate, or assist in the commission of the unlawful acts, and  
7 thereby aided and abetted the other Defendants in the unlawful conduct.

8 20. Defendants have engaged in a conspiracy, common enterprise, and common  
9 course of conduct, the purpose of which is and was to engage in the violations of law alleged in  
10 this Complaint. The conspiracy, common enterprise, and common course of conduct continue to  
11 the present.

12 21. Defendants also served as the agent, servant, employee, alter ego, co-  
13 conspirator, aider and/or abettor of one or more of the ExxonMobil Defendants and acted  
14 individually and/or within the scope of its agency, servitude, employment, and conspiracy.

15 **IV. INDUSTRY GROUPS.**

16 22. For decades, ExxonMobil has used and funded numerous industry groups as a  
17 mechanism to widely spread deceptive messages about the environmental benefits and  
18 recyclability of plastic, including within California.

19 23. The American Chemistry Council (ACC), founded in 1872 and formerly called  
20 the Chemical Manufacturers Association, is an influential industry group that claims to “work[]  
21 for a more sustainable future by developing innovative solutions to advance recovery, recycling,  
22 and reuse of plastic,” among its work in other areas.

23 24. ExxonMobil has been part of the leadership of ACC for decades. ExxonMobil  
24 is currently a member of ACC’s Plastics Division. Numerous individuals at Exxon and Mobil sat  
25 on the Executive Committees for the Chemical Manufacturers Association. ACC leadership has  
26 included members of ExxonMobil’s executive team. ExxonMobil employees likewise have held  
27 leadership positions with ACC’s Plastic Division. From 2008 to 2013, ExxonMobil was the  
28 number one financial contributor to the ACC, in some years contributing three times more than

1 the number two contributor.

2 25. The Plastics Industry Association (PLASTICS) is another group that represents  
3 companies across the plastics supply chain. PLASTICS “protect[s], promote[s], and grow[s] the  
4 plastics industry.” PLASTICS was previously known as the Society of the Plastics Industry (SPI),  
5 until its 2016 name change to PLASTICS. SPI formed in 1937 with the primary purpose of  
6 building public acceptance of plastics. Exxon Chemical Company and Mobil Chemical Company  
7 and/or officials of those companies were members of SPI, on SPI’s executive committee and  
8 executive board, executive board members of SPI’s Council for Solid Waste Solutions, and  
9 headed many committees within SPI, including the Chemical Manufacturers Association  
10 Committee, the Environmental, Health, Safety & Operations Committee, State Affairs  
11 Committee, and the Federal Government Relations Committee. ExxonMobil is currently a  
12 member of PLASTICS. In 2023, an ExxonMobil Senior Sustainability Advisor was Vice Chair of  
13 PLASTICS’ Recycling Committee.

14 26. SPI created numerous subdivisions, including The Vinyl Institute, which has  
15 advocated for decades on behalf of the polyvinyl chloride (PVC) industry. Since at least 1992,  
16 Exxon Chemical US was an affiliate member of The Vinyl Institute. The Vinyl Institute became  
17 an independent organization in 2008. ExxonMobil is now a “Supporting Member” of the Vinyl  
18 Institute. SPI additionally formed a Plastic Bottle Division and the Council on Packaging in the  
19 Environment (COPE, previously known as Council on Plastics and Packaging in the Environment  
20 (COPPE)). COPE was disbanded in or around 1996.

21 27. SPI formed the Council for Solid Waste Solutions (Council) in 1988, which  
22 promoted recycling as an alternative to reducing plastics consumption. Exxon and Mobil were  
23 both on the executive board of the Council.<sup>3</sup>

24 28. In 1991, SPI formed the Partnership for Plastics Progress (Partnership), which  
25 replaced the Council. The purpose of the Partnership was “to provide coordinated industry-wide  
26 leadership at the CEO level and to deal with issues beyond solid waste.” The Partnership’s goal  
27 was “to bring to the fore a well-funded, strategic program of outreach, issues management and

28 <sup>3</sup> Council for Solid Waste Solutions, *The Urgent Need to Recycle* (July 17, 1989) *Time*.

1 legislative affairs to ensure that the public at large and key industry constituents understand the  
2 vital role that plastics play in our society.” Exxon and Mobil were both members of the  
3 Partnership.

4 29. Shortly after the Partnership was created, SPI changed the Partnership’s name  
5 to the American Plastics Council (APC). In or around 2002, the American Plastics Council  
6 merged with the ACC.

7 30. The Alliance to End Plastic Waste (Alliance) is an organization founded by 28  
8 corporations in 2019, including ExxonMobil. The Alliance purports to “end plastic waste in the  
9 environment and advance a circular economy for plastics,” and promotes the feasibility of  
10 “advanced” and mechanical recycling to achieve these goals. Since 2023, ExxonMobil has  
11 employed a full-time “loaned executive” working within the Alliance whose title is “Chief  
12 Advisor, Head of Americas.”

13 31. The Recycling Partnership is an organization that encourages local  
14 governments to improve their recycling programs, in support of the plastics industry’s deceptive  
15 narrative that plastics are sustainable and recycling can solve the plastic waste and pollution  
16 crisis. ExxonMobil has been a member of the Recycling Partnership since 2018, initially  
17 investing \$1.5 million into the organization.

18 32. Another group, America’s Plastic Makers, is an industry group that essentially  
19 consists of the ACC’s Plastics Division, which is made up of ExxonMobil and other businesses in  
20 the plastics industry. America’s Plastic Makers promotes the exceedingly unlikely claims that one  
21 hundred percent of U.S. plastic packaging will be recyclable or recoverable by 2030, and actually  
22 recycled, reused, or recovered by 2040, without any reduction in plastic use.

23 33. ExxonMobil also sponsors the Association of Plastic Recyclers. The  
24 Association of Plastic Recyclers proactively holds meetings in California and regularly seeks to  
25 influence California laws that are intended to reduce plastic waste and pollution.

26 **V. EXXONMOBIL’S BUSINESS SCOPE AND DEALINGS.**

27 34. ExxonMobil is one of the largest oil and gas companies in the world with \$36  
28 billion in profits in 2023, the largest oil and gas company in the United States, and the world’s

1 largest producer of petrochemical polymers used for single-use plastics.<sup>4</sup> These plastics  
2 petrochemicals are derived from oil and gas, allowing ExxonMobil to capitalize on being “the  
3 largest refiner and marketer of petroleum products” in the United States.

4 35. A key component of ExxonMobil’s overall business is producing chemicals for  
5 use in plastics, including ethylene, polyethylene, and polypropylene. ExxonMobil considers the  
6 production of these chemicals, which are used in single-use plastic products, as the “core” of its  
7 chemicals and products portfolio, with “80% of [ExxonMobil’s] growth [being] dependent on  
8 single-use plastics applications.” In 2023, ExxonMobil had an annual production capacity of 14.5  
9 million tonnes<sup>5</sup> (31.9 billion pounds per year) of polyethylene and polypropylene plastics  
10 petrochemicals worldwide, including a production capacity of 7.7 million tonnes per year (16.3  
11 billion pounds per year) in the United States. In 2021, ExxonMobil contributed more “virgin”  
12 plastic polymers (plastic material that has not been subject to earlier use and has not been blended  
13 with scrap or waste) bound for single-use plastic than any other petrochemical company—over  
14 six million tonnes, roughly equivalent to *two trillion* single-use plastic cups in that one year  
15 alone.<sup>6</sup>

16 36. In line with the rapid increase of plastic production globally (see Figure A,  
17 below), ExxonMobil is rapidly increasing its production of these plastics petrochemicals. In the  
18 past ten years, ExxonMobil has increased its worldwide ethylene production capacity by 32  
19 percent, its polyethylene production capacity by 30 percent, and its polypropylene production  
20 capacity by 27 percent worldwide. In the United States, ExxonMobil has increased its plastics  
21 chemicals production capacity even more dramatically: ethylene capacity increased 77 percent,  
22 polyethylene capacity increased 82 percent, and polypropylene capacity increased 89 percent. See  
23 Figure B, below.

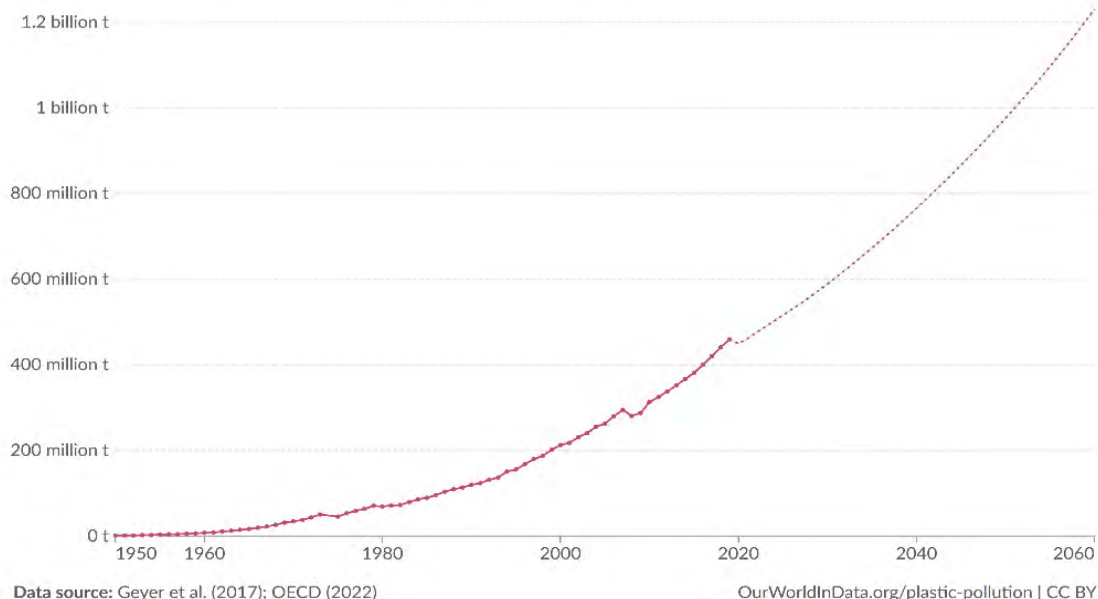
24 <sup>4</sup> Charles and Kimman, Minderoo Foundation, Plastic Waste Makers Index 2023 (2023)  
25 (hereafter Minderoo 2023).

26 <sup>5</sup> Note that ExxonMobil typically reports production in “metric tonnes.” “Tonne” is  
27 another term for metric ton. One tonne is equal to the weight of 1.1 U.S. tons (2,204.6 pounds).  
(See Encyclopedia Britannica, *Ton*, <https://www.britannica.com/science/ton> [as of Apr. 4, 2024].) In some cases, ExxonMobil employs U.S. units (lbs.) when reporting weights. This Complaint  
28 converts U.S. tons to tonnes throughout.

<sup>6</sup> Minderoo 2023, *supra*. This estimate assumes it takes about three grams of plastic  
petrochemicals to produce one plastic cup.

**Figure A: Plastics Production Chart and Prediction To 2060<sup>7</sup>****Global plastic production with projections, 1950 to 2060**Our World  
in Data

Annual production of polymer resin and fibers. Projections are based on the "business-as-usual" scenario which assumes that current policies remain unchanged in the foreseeable future.

**Figure B: ExxonMobil Plastic Chemical Production Capacity – 2014 through 2023**

Year	U.S. Ethylene Capacity <i>In Million Tonnes</i>	U.S. Polyethylene Capacity <i>In Million Tonnes</i>	U.S. Polypropylene Capacity <i>In Million Tonnes</i>
2014	3.9	3.3	.9
2015	3.9	3.3	1.0
2016	3.9	3.3	1.1
2017	4.3	4.6	0.9
2018	5.8	4.6	1.1
2019	5.8	5.3	0.9
2020	5.8	5.3	0.9
2021	5.9	5.3	1.1
2022	6.9	6.0	1.6
2023	6.9	6.0	1.7

<sup>7</sup> Global Plastic Production with Projections, 1950 to 2060, Our World in Data  
<https://ourworldindata.org/grapher/global-plastic-production-projections> (as of July 29, 2024).

## JURISDICTION AND VENUE

40. This Court also has personal jurisdiction over ExxonMobil pursuant to Code of Civil Procedure section 410.10. ExxonMobil purposefully availed itself of the California market, and thus of the benefits of the laws of the State, during all times relevant to this Complaint. ExxonMobil's operations, contacts, and ties with California establish California courts' exercise of jurisdiction over ExxonMobil consistent with traditional notions of fair play and substantial justice. ExxonMobil researched, developed, manufactured, designed, marketed, distributed, released, promoted, and/or otherwise sold petrochemical products, including petrochemicals that are used to make plastics and ExxonMobil "certified circular polymers," in California, giving rise to the claims of this suit.

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controls and continues to control decisions related to its marketing and advertising, specifically communications strategies concerning the efficacy of plastic recycling, including “advanced recycling,” and the relationship between plastics, recycling, and plastic-related impacts on the environment and humans, and has targeted California with those advertisements and communication strategies.

**I. EXXONMOBIL’S BUSINESS TIES TO CALIFORNIA.**

42. Significant quantities of ExxonMobil’s petrochemical products and plastics made from ExxonMobil’s petrochemicals are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities ExxonMobil derives and has derived substantial revenue—ExxonMobil’s U.S. earnings total over \$12 billion from chemical products in the past three years.

43. ExxonMobil’s petrochemical manufacturing is fused with ExxonMobil’s oil and gas production, with more than 90 percent of the company’s chemical capacity integrated with ExxonMobil refineries or natural gas processing plants. Historically, ExxonMobil owned 1,501 oil and gas wells in California. Until 2022, ExxonMobil operated another 58,212 wells in California with Shell Oil Company through a jointly owned entity, Aera Energy, LLC; 14,188 of these wells are currently active. Aera produces approximately 125,000 barrels of oil and 32 million cubic feet of natural gas per day and was sold to IKAV Energy in 2022 for \$4 billion. ExxonMobil also owns and operates a petroleum storage and transport facility in San Ardo, California. Until February 2024, ExxonMobil operated three offshore oil production platforms off the coast of Santa Barbara, and currently retains a large financial stake in the entity that purchased the platforms, Sable Offshore Corp.<sup>8</sup> In 2021, ExxonMobil Chemical Company acquired Materia Inc., a producer of plastic structural polymers headquartered in Pasadena, California, for \$156 million. ExxonMobil also owned and operated an oil refinery in Torrance, California from 1966 to 2016, operated a petroleum refinery in Benicia, California, from 1968 to 2000, and has a long history in California, including operating four manufacturing facilities (two chemical coatings

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<sup>8</sup> ExxonMobil sold the platforms to Sable for \$643 million but provided Sable a loan of at least \$625 million for the purchase.

and two plastic packaging facilities), a plastic production facility for polystyrene foam trays and egg cartons, a plastic production facility for polyethylene films for bags and meat and poultry wrappings, and a polystyrene recycling facility through partial ownership of the National Polystyrene Recycling Company.

44. ExxonMobil, through its chemical division, has a vast customer base for its plastics petrochemicals. Its customers include the largest U.S. suppliers of plastics packaging, including companies that produce single-use plastic bags, bottles, cups, and other food and beverage packaging that are sold nationwide, with products ending up in California under household brand names. For example, Exxon sells its plastics petrochemicals to Berry Global, who sells plastic products to the following national brands:

**Figure C: Berry Global Customers**



45. ExxonMobil also distributes its plastics petrochemicals to plastics distribution centers located throughout California. These distribution centers act as intermediaries between ExxonMobil and businesses that make and sell plastic products. Through these intermediaries, ExxonMobil's plastics petrochemicals become plastic bags, plastic cups, plastic water and soda bottles, plastic food packaging, and other single-use plastic products (among other applications). Additionally, California business customers have purchased ExxonMobil's "advanced recycling" "certified circular polymers" for use in single-use plastic products. ExxonMobil also regularly participates in trade conferences in California to promote its petrochemical plastics products to intermediaries and other business customers.

46. ExxonMobil uses its intermediaries and business customers to help promote

1 plastics consumption as environmentally sustainable in an effort to increase or maintain demand  
2 for ExxonMobil's plastics petrochemicals. Most recently, ExxonMobil has partnered with several  
3 businesses that sell products in California, including a California-based plastics producer, to  
4 promote ExxonMobil's "advanced recycling" by issuing press releases to promote the use of  
5 ExxonMobil's "certified circular polymers."

6 47. ExxonMobil views government regulations affecting "production or use of new  
7 or recycled plastics" as a significant "risk factor" to its business. Accordingly, ExxonMobil has  
8 lobbied extensively against plastics regulations in California, and specifically against legislation  
9 holding plastics producers accountable for the environmental impacts of its products.<sup>9</sup> In 2022,  
10 ExxonMobil paid \$4 million to the American Chemistry Council (ACC) to fight a California  
11 ballot measure seeking to establish an extended producer responsibility program<sup>10</sup> for plastic  
12 products. Since 2020, ExxonMobil has paid \$23.4 million to the ACC to fund national lobbying  
13 efforts to promote plastic products across the United States, including within California. Recently,  
14 ExxonMobil identified California as a target market for new legislation to promote "advanced  
15 recycling" as an alleged solution to the plastic waste crisis. ExxonMobil also targets California  
16 with advertising, such as radio spots related to its ongoing efforts to advance plastic-friendly  
17 legislation in the State. As recently as within the last year, ExxonMobil targeted online  
18 advertisements to Californians regarding "advanced recycling." ExxonMobil has funded  
19 numerous lobbying efforts, directly and through trade associations and industry groups, to defeat  
20 regulations that would reduce the harm to humans and the environment from its plastic products  
21 in California and nationwide.

22 48. ExxonMobil has also sought to establish business connections under its  
23 "advanced recycling" program with California municipalities.

24 49. Finally, ExxonMobil has supplied substantial quantities of fossil fuel products

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25 <sup>9</sup> Through this Complaint, the People of the State of California are not challenging  
26 "lobbying efforts" per se, but rather this action challenges the illegal acts in violation of  
27 California law that may be connected to these lobbying efforts. These lobbying efforts also  
28 exemplify ExxonMobil's significant contacts with California.

<sup>10</sup> Extended producer responsibility ("EPR") is a policy of assigning the end-of-life  
responsibilities and costs of a product to the producer of that product.

1 to California. Currently, ExxonMobil promotes, markets, and sells gasoline and other fossil fuel  
2 products to California consumers through approximately 600 Exxon- and Mobil-branded  
3 petroleum service stations in California.

4 50. Venue is proper in this Court pursuant to California Code of Civil Procedure  
5 section 394 because Defendants conduct business in San Francisco County and throughout  
6 California, and the violations of law and the public nuisance alleged in this Complaint occurred in  
7 San Francisco County and throughout California.

## 8 **II. EXXONMOBIL'S DECEPTIVE MARKETING IN CALIFORNIA.**

9 51. ExxonMobil purposefully directed deceptive conduct toward California by  
10 marketing, advertising, and promoting petrochemical plastics products as sustainable.  
11 ExxonMobil made statements in furtherance of its campaign of deception about the efficacy of  
12 plastic recycling, including about "advanced recycling," and affirmatively promoted recycling  
13 technology as able to solve the plastic waste and pollution crisis. ExxonMobil made these  
14 statements knowing that plastic recycling is inadequate to stop or reverse the plastic waste and  
15 pollution crisis. These statements were designed to conceal and mislead consumers, including the  
16 State, its businesses, and its residents about the serious adverse consequences that would result  
17 from continued use of plastic products, including ExxonMobil's virgin and/or recycled plastics  
18 materials and products containing those materials.

19 52. ExxonMobil promoted plastic recycling in a manner that directly and  
20 foreseeably impacted and continues to impact California, with knowledge that the intended use of  
21 its plastic products harmed and will continue to harm California and elsewhere. ExxonMobil  
22 purposefully directed its misleading conduct to reach the State, its businesses, and its residents, to  
23 promote the continued and unabated use of plastics products, including ExxonMobil's plastics  
24 products, in California and elsewhere. These deceptions have resulted in significant injuries in the  
25 State while increasing sales to ExxonMobil.

26 53. Over the past several decades and continuing to the present day, ExxonMobil  
27 and/or its agents, servants, alter-egos and/or abettors named above ran extensive print, radio,  
28 television, online, social media, and outdoor advertisements in the California market that

1 deceptively promoted recycling technology as a key solution that would reverse or substantially  
2 mitigate those harms.

3 54. Since at least 1988, ExxonMobil has deceptively promoted recycling as a key  
4 solution to the plastic waste and pollution crisis in print publications circulated widely to  
5 California consumers, including but not limited to: *San Francisco Examiner*, *Los Angeles Times*,  
6 *Sacramento Bee*, *Oakland Tribune* (now known as the *East Bay Times*), *Victorville Daily Press*,  
7 *Simi Valley Star Enterprise*, *Lompoc Record*, *Signal*, *Record Searchlight*, and numerous other  
8 California newspapers, as well as national publications with strong circulation in California,  
9 including but not limited to *The New York Times*.<sup>11</sup> ExxonMobil has also used social media  
10 platforms with a significant user base in California, including but not limited to Meta (Facebook),  
11 X (formerly Twitter), and YouTube, to spread misinformation about the efficacy of plastics  
12 recycling at a scale to address the plastics waste and pollution crisis. As further detailed below,  
13 these campaigns have included advertisements containing false or misleading statements,  
14 misrepresentations, and/or omissions designed to encourage the consumption of plastics products,  
15 including ExxonMobil's plastics products, by falsely reassuring consumers that they can continue  
16 using plastics because recycling, including "advanced recycling," is an effective solution to the  
17 plastic waste and pollution crisis, and/or misrepresenting ExxonMobil's products or ExxonMobil  
18 itself as environmentally friendly.

19 55. ExxonMobil, through vertically integrated segments and divisions, furthers its  
20 campaign of deception by: (1) misrepresenting the recyclability of plastics; (2) omitting or  
21 misstating the limited availability and efficacy of plastic recycling; and (3) affirmatively  
22 promoting the company's plastic-input products as recyclable and/or made from recycled plastics.  
23 ExxonMobil furthers this deception despite knowing the inadequacy and unavailability of plastic  
24 recycling at scale and the human and environmental harms that necessarily result from the  
25 intended use of ExxonMobil's plastic-input products.

26  
27 <sup>11</sup> Exxon has a long history, dating back to 1970, of running influential advertising  
28 campaigns framed as public interest opinion editorials in major national newspapers including  
*The New York Times*, *Washington Post*, *Wall Street Journal*, *Chicago Tribune*, and *Los Angeles Times*. For many years, these advertisements ran weekly.

56. ExxonMobil, by and through industry groups and other organizations, worked to conceal and misrepresent the known dangers of plastic; to knowingly withhold material information regarding the consequences of using plastic products, the inefficacy of plastics recycling; the infeasibility of plastic recycling to meaningfully scale, and the proportion of its “certified circular polymers” actually sourced from recycled plastic waste materials; and to spread knowingly false and misleading information to the public regarding the efficacy of plastics recycling at a scale to address the plastics waste and pollution crisis.

57. ExxonMobil, through its own actions and through its membership and participation in industry groups, engaged in this longstanding campaign to promote continued and increased use of plastics products, including ExxonMobil’s plastics petrochemical products, which it knew would result in injuries to the State and elsewhere.

58. ExxonMobil and DOES 1-100 (collectively, “Defendants”) committed substantial acts to further its deceptive practices in California by making affirmative misrepresentations or omissions to California consumers about the existence, causes, and effects of plastic pollution and the efficacy of recycling; and by affirmatively promoting plastics products, including ExxonMobil’s plastics petrochemical products, as safe and environmentally friendly. Defendants committed this deception with knowledge of the extremely harmful impacts that would result from the intended and foreseeable use of those products. A substantial effect of Defendants’ actions has and will occur in California, as the State has suffered and will suffer injuries from ExxonMobil’s wrongful conduct. ExxonMobil knew—based on information provided to it from its internal research divisions, affiliates, trade associations, and industry groups—that its actions in California and elsewhere would result in these injuries in and to the State. Finally, the harmful effects described herein are the direct and foreseeable results of ExxonMobil’s conduct in furtherance of the conspiracy.

## FACTUAL BACKGROUND

### **I. EXXONMOBIL IS SUBSTANTIALLY RESPONSIBLE FOR CAUSING AND EXACERBATING THE PLASTIC WASTE AND POLLUTION CRISIS, WHICH IS CAUSING DEVASTATING HARM.**

#### **A. The Plastic Waste and Pollution Crisis.**

59. ExxonMobil is the world's largest producer of plastic polymers, the building blocks of single-use plastics that become plastic pollution.

60. The excessive amount of plastic waste and pollution is one of the most serious environmental crises confronting California and the planet today.<sup>12</sup> Plastic pollution is proliferating in oceans, seas, rivers and lakes, accumulating at or near the surface, on lake and ocean bottoms, and along riverbanks and shorelines.<sup>13</sup> And plastic waste has found its way into every corner of the globe—from remote marine environments<sup>14</sup> to the deepest point of the ocean floor, on the highest mountains, in rock formations, and floating in the air.<sup>15</sup> According to the U.S. Environmental Protection Agency's (EPA) latest estimates, approximately 23 percent of global plastic waste was improperly disposed of, burned (creating harmful and toxic emissions), or leaked into the environment in 2019.

61. Widespread production and promotion of single-use plastic has led to persistent plastic leakage into the environment.<sup>16</sup> Around the world each year, an estimated 11 million tonnes of plastic waste become aquatic pollution and 18 million tonnes are polluted to land. Together, that is the equivalent of four garbage trucks of plastic waste polluted in the water or land *every minute*.<sup>17</sup> In the United States—even with its advanced solid waste management system—as much as 1.45 million tonnes of plastic was polluted to the ocean in 2016.<sup>18</sup> Plastic products account for approximately 85 percent of total marine waste and between 70 to 80

<sup>12</sup> Merkl and Charles, The Minderoo Foundation, *The Price of Plastic Pollution: Social Costs and Corporate Liabilities* (2022) p. 7 (hereafter Minderoo 2022).

<sup>13</sup> Corcoran et al., *An Anthropogenic Marker Horizon in the Future Rock Record* (2014) 24 GSA Today 4.

<sup>14</sup> Trainic et al., *Airborne Microplastic Particles Detected in the Remote Marine Atmosphere* (2020) 1 Communications Earth and Environment 64.

<sup>15</sup> World Health Organization, *Dietary and Inhalation Exposure to Nano- and Microplastic Particles and Potential Implications for Human Health* (2022) pages 13-44.

<sup>16</sup> Organization for Economic Cooperation and Development (OECD), *Plastic Pollution is Growing Relentlessly as Waste Management and Recycling Fall Short, Says OECD* (Feb. 22, 2022) <<https://www.oecd.org/environment/plastic-pollution-is-growing-relentlessly-as-waste-management-and-recycling-fall-short.htm>> (as of July 29, 2024).

<sup>17</sup> Lau et al., *Evaluating Scenarios Toward Zero Plastic Pollution* (2020) 269 Science 1455.

<sup>18</sup> Law et al., *United States' Contribution of Plastic Waste to Land and Ocean* (2020) 6 Science Adv. 2375.

1 percent of all waste that ends up on land or in marine environments combined.<sup>19</sup>

2 62. In California, from 1990 to 2022, an astounding 2.7 to 3.3 million tonnes of  
3 plastic waste escaped into California's environment. In 2022 alone, estimates of the amount of  
4 plastic waste leaked to land and into the ocean in California ranged from 121,324 to 179,656  
5 tonnes—the equivalent of dumping 20 to 30 garbage trucks of plastic waste *per day* into  
6 California's landscapes and waterways.

7 63. The steep increase in plastic production over the past 60 years, as depicted in  
8 Figure A, created a dramatic increase in plastic waste: in the United States, plastic increased as a  
9 percent of municipal solid waste (by mass) from 0.4 percent in 1960 to 12.2 percent in 2018.<sup>20</sup> An  
10 estimated 44 million tonnes of plastic waste were generated in the United States in 2019.  
11 Meanwhile, the plastic recycling rate in the United States in 2019 was estimated to be a mere five  
12 percent. As new plastic production relentlessly rises, the generation of plastic waste inevitably  
13 increases.

14 64. Nearly two-thirds of total plastic waste comes from products that are discarded  
15 within five years of purchase, such as packaging (40 percent), consumer products (12 percent),  
16 and textiles (11 percent).<sup>21</sup> Single-use plastics—plastic packaging, bags, straws, and disposable  
17 plasticware and utensils—represent the largest plastics application, and account for one-third of  
18 all plastics consumed globally.<sup>22</sup>

19 65. Single-use plastics comprise most of the plastic waste that escapes and/or is  
20 discharged into the environment.<sup>23</sup> Rising production of single-use plastics and the consequent  
21 rise of plastic waste and pollution has contributed to such phenomena as the “great Pacific  
22 garbage patch,” consisting of several vast swirling gyres of floating plastic pieces dispersed over

23  
24 <sup>19</sup> U.S. Environmental Protection Agency, Draft National Strategy to Prevent Plastic Pollution (2023).

25 <sup>20</sup> Com. on the U.S. Contributions to Global Ocean Plastic Waste, Nat. Academy  
26 Sciences, Engineering, and Medicine, Reckoning with the U.S. Role in Global Ocean Plastic Waste (2022) page 3. (Additionally, the generation of municipal solid waste in the United States has increased significantly over the past 60 years).

27 <sup>21</sup> Organization for Economic Cooperation and Development (OECD), *Plastic Pollution is Growing Relentlessly as Waste Management and Recycling Fall Short*, *supra*.

28 <sup>22</sup> Minderoo 2023, *supra*, page 17.

<sup>23</sup> *Ibid*.

1 a huge surface of the Pacific Ocean and throughout the upper portion of the ocean column.

2 66. Plastic pollution has pervasive consequences at the local, regional, and state  
3 levels in California, for the environment, the state's unique natural and recreational resources, the  
4 economy, and potentially for human health.<sup>24</sup> Plastic pollution causes substantial, persistent, and  
5 ongoing harm to California's unparalleled coastal recreational resources, residents, tourism, and  
6 local economies.<sup>25</sup> Plastic waste visibly pollutes California's beaches, rivers, waterways and  
7 marine environments, fouls recreational areas, and threatens marine life and sensitive habitats and  
8 ecosystems.<sup>26</sup>

9 **Figure D: Ballona Creek leading to Santa Monica Bay (Photo Credit: Bill MacDonald,  
10 Algalita Research Foundation)**



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22 67. Plastic waste has devastating effects on California's wildlife. Plastic waste  
23 entangles and endangers California marine life, including seals, sea birds, sea turtles, whales, and  
24 dolphins, resulting in hindered movement, decreased feeding ability, injury, and death.<sup>27</sup> Plastic

25  
26 <sup>24</sup> Cal. Ocean Protection Council and Nat. Oceanic and Atmospheric Admin. Marine  
Debris Program, California Ocean Litter Prevention Strategy: Addressing Marine Debris from  
Source to Sea (2018) page 10 (hereafter, OPC 2018).

27 <sup>25</sup> *Id.* at page 38.

28 <sup>26</sup> *Id.* at page 10.

<sup>27</sup> *Id.* at page 37.

waste is ingested by California raptors and sea birds, with devastating impacts on bird fitness and survival. Plastic waste smothers sensitive coastal and wetland habitats,<sup>28</sup> including coral reefs and salt marshes, and disrupts growth and surface cover.<sup>29</sup> Plastic debris inhibits the growth of aquatic vegetation, decreasing spawning areas and habitats for fish and other living organisms, threatening marine biodiversity and the food web.<sup>30</sup>

68. Even managed plastic waste contributes to plastic pollution of the environment. As plastic waste degrades in landfills, microplastics are released into the surrounding environment, including contamination of soil, groundwater, and surface water by air and by leachate.<sup>31</sup>

69. Once plastic waste enters the environment as pollution, it is long-lived, cumulative, friable, and mobile, and can have substantial negative impacts on a wide range of freshwater, marine, and terrestrial species. Removing plastics from the environment becomes difficult and costly as plastics fragment into smaller and smaller pieces.

#### **B. The Microplastics Pollution Crisis.**

70. Plastics do not biodegrade.<sup>32</sup> Exposed to the elements, plastics that have leaked into the environment inevitably disintegrate into smaller and smaller pieces until they eventually become “microplastics,” tiny plastic bits measuring five millimeters or less, that are readily transported by air, wind, water, and the fecal matter of organisms that ingest them. Microplastic pollution has been identified as one of the most widespread and long-lasting anthropogenic changes to the surface of the Earth, and a great threat to a wide range of species and ecosystems.

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<sup>28</sup> *Id.* at page 5.

<sup>29</sup> *Id.* at page 37.

<sup>30</sup> Thevenon et al., Internat. Union for Conservation of Nature, Plastic Debris in the Ocean: The Characterization of Marine Plastics and their Environmental Impacts, Situation Analysis Report (2015) page 17.

<sup>31</sup> Leachate is a solution or product obtained by leaching, especially from landfills or other sources.

<sup>32</sup> Plastic materials do not exist in nature, and therefore there are no naturally occurring organisms that can break them down effectively or at all. It is estimated that under normal conditions in nature, plastic bottles will begin to break down only after 500-700 years; plastic bags will begin to break down only after a thousand years, and even then, the process will be very slow.

71. Microplastics have been detected in the deep sea, in freshwater bodies, and groundwater; in soils and in sediments; on mountaintops; and in the air we breathe. Microplastics are ingested by marine organisms,<sup>33</sup> and have been found in fish and other aquatic species, with observed adverse effects including altered feeding habits, tissue inflammation, impaired growth, developmental anomalies, and reductions in reproductive success.<sup>34</sup>

72. Microplastics can be particularly dangerous to wildlife; when eaten, microplastics have been found to accumulate inside an animal's body, causing a variety of critical health issues. Microplastics have been found to both absorb and adsorb<sup>35</sup> toxic chemicals that are harmful to aquatic life. Laboratory studies show that chemicals released from microplastics can transfer up the food chain, potentially affecting the health of species at all levels of the ecosystem.

73. On land, microplastics have been found in the guts and feces of a variety of land-based wildlife, including birds, small mammals, and insects. Ingestion of microplastics has negative impacts on the health of these species, including reducing fitness and altering immune system functions.<sup>36</sup>

74. Microplastic pollution has been identified as an emerging global threat to terrestrial ecosystems, remaining persistent and mobile in soil environments. Microplastics affect soil biota, decrease seed germination, and inhibit plant growth and productivity. Microplastic contamination of agroecosystems can reduce food yields, and negatively impact food chain components and food security. Once dispersed into the environment, microplastics are almost impossible to eradicate.

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<sup>33</sup> OPC 2018, *supra*, at pages 5, 10.

<sup>34</sup> Sarkar et al., *Microplastic Pollution: Chemical Characterization and Impact on Wildlife* (2023) 20 Internat. J. Environmental Research and Public Health 1745; see also Besseling et al., *Effects of Microplastic on Fitness and PCB Bioaccumulation by the Lugworm Arenicola marina* (L.) (2012) 47 Environmental Science & Technology 593; Cal. Ocean Protection Council, Statewide Microplastics Strategy (2022) page 4 (hereafter OPC 2022).

<sup>35</sup> "Adsorb" means to take up and hold or attach to the surface of another substance.

<sup>36</sup> Sarkar et al., *supra*.

**C. Microplastics Likely Have Negative Human Health Consequences.**

75. As studies emerge regarding the effects of microplastics on human health, they point to potentially dire consequences. Humans are exposed to microplastics predominantly through inhalation of tiny plastic particles suspended in indoor and outdoor air, and through ingestion of microplastic particles found in water, food, and other beverage sources.<sup>37</sup> A 2018 study of 259 bottled water samples across 19 different locations in nine countries, including the U.S., found 93 percent were contaminated with microplastic—on average, 10.4 microplastic particles per liter.<sup>38</sup> Other studies have found microplastics in globally sourced tap water samples, American-made beer, and commercial sea salt.

76. Once inhaled or ingested by humans, microplastic particles have been found to lodge in the respiratory or digestive tract.<sup>39</sup> Particles can then be absorbed through the small intestine and lungs and distributed throughout the body to other organs via the circulatory system. Microplastics have been found accumulating in the human gut, lungs, and bloodstream. Even more alarming are recent discoveries of microplastics in the human reproductive system, such as the male testis, mammary glands (breastmilk), and placental tissue. Studies are finding evidence that microplastics can enter human cells and can even cross the blood-brain barrier in mammals.

77. Microplastics' physical presence in the human body has been associated with chronic inflammation, oxidative stress, and cytotoxicity (potentially increasing cancer risk). Studies also indicate that chemicals adsorbed by microplastics consumed by people through food or other routes of exposure can desorb in the human body and have toxic impacts. Some chemical additives to plastic, such as phthalates, bisphenol A (BPA), and per- and polyfluoroalkyl substances (PFAS), are recognized as toxic chemicals that impact the endocrine, reproductive, and other systems.<sup>40</sup>

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<sup>37</sup> World Health Organization, *supra*, at pages 13-44.

<sup>38</sup> Mason et al., *Synthetic Polymer Contamination in Bottled Water* (2018) 6 *Frontiers in Chemistry* 407.

<sup>39</sup> World Health Organization, *supra*, at pages 13-44.

<sup>40</sup> UNEP, *From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution* (2021).

78. A recent study found that patients with carotid artery plaque in which microplastics were detected had a higher risk of a composite of myocardial infarction, stroke, or death (from any cause) than those patients in whom microplastics were not detected. Other studies indicate that microplastics particles can be vectors for disease or other toxic transmission because they can adsorb and transmit human pathogenic microbes, parasites, or other contaminants when inhaled or ingested by humans.

79. Published research also points to wide-ranging potential neurotoxicity, pulmonary toxicity, hepatotoxicity, cardiotoxicity, reproductive toxicity, and nephrotoxicity in human beings resulting from microplastics exposure. While the full health effects of human exposure to microplastics and the potential for accumulation of microplastics in human tissues remain unknown, the existing research indicates potentially severe, and even deadly, impacts.

**D. ExxonMobil Substantially Contributes to the Plastic Waste and Pollution Crisis.**

80. ExxonMobil produces the primary chemicals and polymers used to produce plastic and styrofoam products such as bottles, cups, plates, utensils, take-out containers, and packaging designed for single-use that are sold throughout the United States and in California. ExxonMobil considers the production of these polymers as the “core” of its chemicals and products portfolio and sees 80 percent of its growth potential as “dependent on single-use plastics applications.”

81. ExxonMobil produces more virgin polymers bound for single-use plastic production than any other petrochemical company,<sup>41</sup> and is the world’s largest contributor to single-use plastic waste.<sup>42</sup> ExxonMobil’s polymer products are used to make the plastic items most commonly and consistently picked up on California shorelines, including food wrappers and takeout containers; caps and lids; plastic bags; cups, utensils and plates; straws and stirrers; and beverage bottles. These are among the top 10 categories of debris items consistently picked up on California beaches and riverbanks on Coastal Cleanup Day over the past 34 years. ExxonMobil’s

<sup>41</sup> Minderoo 2023, *supra*.

<sup>42</sup> *Id.* at page 12.

polymer products are also used to make six-pack beverage rings and mylar balloons, items that commonly blight California shorelines and parks.

82. The inescapable consequence of ExxonMobil producing billions of pounds of plastic is the plastic waste and plastic pollution crisis. There is a direct relationship between the rise in plastic production and the rise in plastic pollution—a recent comprehensive study of plastic pollution audits in *Science Advances* found “a 1% increase in [plastic] production, result[s] in approximately a 1% increase in branded plastic pollution.” The study compiled over 1,500 audits of over 1.8 million plastic items and concluded that waste management is insufficient to stop plastic pollution. Instead, “reduced plastic production is a primary solution to curb plastic pollution,” and that, in particular, “[p]hasing out single-use and short-lived plastic products by the largest polluters would greatly reduce global plastic pollution.”

83. California has identified source reduction as one of the top priorities for addressing this plastic pollution crisis.<sup>43</sup> Source reduction will reduce the burden on waste management systems and prevent plastic waste from reaching the environment.<sup>44</sup>

84. California has borne the burden of the harmful economic, environmental, and potential human health impacts of ExxonMobil’s deceptions, which have resulted in the deluge of plastic waste, while ExxonMobil has recorded record profits (\$36 billion in profits in 2023). Indeed, as stated above, ExxonMobil recently opposed a shareholder proposal to issue a report on how reducing virgin plastic production to reduce ocean plastic pollution would affect ExxonMobil’s financial position in 2022.

## **II. FOR DECADES, EXXONMOBIL DECEPTIVELY PROMOTED MECHANICAL RECYCLING AS THE SOLUTION TO THE PLASTIC WASTE AND POLLUTION CRISIS.**

85. Particularly after the Great Depression, Americans were not accustomed to the concept of throwing anything away. To change this behavior, in the 1950s and 1960s, ExxonMobil’s predecessor companies actively sought to normalize single-use plastic products. They were successful. Demand for plastic products began to rise but so did the inevitable

<sup>43</sup> OPC 2022, *supra*; OPC 2018, *supra*. Source reduction refers to a net reduction in the generation and production of plastic waste. See Public Resources Code section 40196.

<sup>44</sup> OPC 2022, *supra*; OPC 2018, *supra*.

1 pollution. By the late 1960s and 1970s, the public began demanding action to reduce or eliminate  
 2 production of plastic products. In response, ExxonMobil's predecessors participated in industry-  
 3 wide efforts to promote so-called "solutions" to plastic waste such as landfilling and incineration.  
 4 When these efforts were unsuccessful at quelling public outcry, a small number of petrochemical  
 5 companies including Exxon and Mobil began a decades-long campaign that began in the 1980s to  
 6 convince the public that mechanical recycling would solve the plastic waste and pollution crisis.  
 7 This campaign, which is ongoing today, succeeded in convincing the public that plastics were  
 8 recyclable. This gave ExxonMobil cover for decades to continue producing more and more  
 9 plastic unchecked. All the while, the plastic recycling rate has never broken nine percent, even  
 10 when the U.S. was exporting massive amounts of plastic waste to China under the guise of  
 11 recycling.

12 **A. ExxonMobil Encouraged the Public to Live a Throw-Away Lifestyle and**  
 13 **Normalized the Consumption of Unnecessary Single-Use Plastics to Fuel**  
 14 **Demand for ExxonMobil's Plastic Products.**

15 86. ExxonMobil and the plastics industry have promoted plastics to Americans for  
 16 decades. The Society of the Plastics Industry (SPI), of which Exxon and Mobil were each  
 17 members (before they merged to become ExxonMobil), formed in 1937 for the primary purpose  
 18 of building public acceptance of plastics.

19 87. Initially, SPI and the plastics industry promoted the durability of plastics.<sup>45</sup>  
 20 However, "it didn't take long for the industry to recognize that disposables were the route to  
 21 growth, and for a prosperous public to get comfortable with the idea of throwing plastic  
 22 packaging away."<sup>46</sup> When disposable plastic cups first became available, people would save and  
 23 re-use them, but the industry confidently predicted that "[i]t is only a matter of time until the  
 24 public accepts the plastics [sic] cups as more convenient containers that are completely  
 25 discardable."<sup>47</sup> Manufacturers of all kinds marketed the disposable commodity "under the  
 26 alluring dual banner of cleanliness and convenience."<sup>48</sup>

27 <sup>45</sup> Freinkel, *Plastic: A Toxic Love Story* (2011) page 145.

28 <sup>46</sup> *Ibid.*

<sup>47</sup> Rogers, *Gone Tomorrow: The Hidden Life of Garbage* (2005) page 122.

<sup>48</sup> *Id.* at page 115.

88. The plastics industry decided to convince the public that plastic products were necessary. “Not a single solid market for plastics in existence today was eagerly waiting for these materials.”<sup>49</sup> But as time went on, plastics replaced natural materials and often became the only choice available to consumers, regardless of actual consumer preferences.<sup>50</sup>

**Figure E: Life Magazine Depicting the Throw Away Culture That Was Promoted from 1955 Previewing a Consumer Market and Society Flooded with Single-Use Plastic**



89. “At the SPI’s [ ] 1956 national conference, participants were told that ‘developments should be aimed at low cost, big volume, practicability, and *expandability*.’ In short, the producers’ aim should be for their products to end up ‘in the garbage wagon.’”<sup>51</sup> Reusable packages could account for thousands of units sold, but those “used once and thrown

<sup>49</sup> Freinkel, *supra*, at page 142 (quoting a June 1956 article in the trade journal *Modern Plastics*).

<sup>50</sup> Rogers, *supra*, at page 123.

<sup>51</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling: How Big Oil and the Plastics Industry Deceived the Public for Decades and Caused the Plastic Waste Crisis* (Feb. 2024) page 5 (quoting *Plastics in Disposables and Expendables* (1957) 34 *Modern Plastics* 93 [emphasis in original]).

away” represent “an everyday recurring market measured by the *billions* of units.” The same speaker praised the industry seven years later for “filling the trash cans, the rubbish dumps and the incinerators with literally billions of plastic bottles, plastic jugs, plastic tubes, blisters and skin packs, plastic bags and films and sheet packages—and now even plastic cans. The happy day has arrived when nobody any longer considers the plasticss [sic] package too good to throw away.”

90. Both Exxon and Mobil have been leaders in plastic production since at least the 1960s. Mobil (pre-merger) formed the Mobil Chemical Company in 1960, a new division of Mobil that was tasked with carrying out the company’s petrochemical activities. By 1966, Mobil, the “leading producer of polyethylene film[,] . . . had already developed an extensive line of substitutes for paper packaging. Its bag-on-a-roll had replaced paper sacks in grocers’ produce sections and its Hefty trash bags helped alter people’s longtime habit of lining their garbage pails with newspaper.”<sup>52</sup>

91. As of 1969, Mobil invented a range of consumer products that used its plastic polymers, most of which were intended to be thrown away, ranging all the way from plastic squeeze bottles to automobile parts.” This included selling polystyrene “Mobilfoam” egg cartons and developing BICOR (“a Mobil-developed family of oriented polypropylene films”), a replacement for cellophane. Around this time, Mobil began a heavy marketing campaign to promote plastics. Mobil’s advertisements appeared as announcements on NBC’s *Today* and *Tonight* shows, offering coupons for purchase of Hefty trash can liners.

92. By the 1970s, Mobil owned ten plastics packaging plants in the United States. Mobil’s plastic production facilities included a polystyrene plant in Bakersfield, California and a polyethylene film plant in Woodland, California. Additionally, Mobil’s ethylene plant in Beaumont, Texas, produced a key building block for plastics. Mobil added a polyethylene plant in Beaumont in the mid-1970s. Mobil boasted it was “number 1 in disposable plastics.”

93. In the late 1970s, Mobil invented even more additional plastic products designed to replace existing products made out of other materials—plastic grocery sacks, plastic shopping bags, and containers for fast food. Mobil additionally created disposable foam plates

<sup>52</sup> Freinkel, *supra*, at page 143.

1 and drinkware under the Hefty brand as well as a new stretch film—Mobilrap X stretch film. In  
2 1971, Mobil held a “Bag Your Trash” promotion in 60 cities to encourage the use of plastic trash  
3 can liners. Mobil encouraged the public to purchase and/or use these and other plastic products,  
4 all of which were designed for a single use and then tossed.

5 94. Mobil also created novel plastic products that did not necessarily have an  
6 existing equivalent, but nevertheless provided a use for Mobil’s burgeoning plastic production.  
7 Examples include Mobil’s “Guestware,” a line of disposable polystyrene avocado-green  
8 dinnerware designed to be presentable for guests without the work of washing dishes, or the  
9 “Hefty Fashion Plate,” a premium version of the regular Hefty disposable plates. Through the  
10 creation of such products, Mobil encouraged consumers to habitually rely on and dispose of  
11 plasticware rather than reusable products, sustaining Mobil’s plastic business.

12 95. Exxon and Mobil promoted the use and disposal of plastic products through the  
13 Society of the Plastics Industry (SPI). SPI, at its annual meeting, reported that it deployed a  
14 female employee to women’s groups in the Midwest to explain the benefits of plastics. The  
15 plastics industry’s efforts were specifically directed to making plastics more appealing,  
16 encouraging a “throw away” culture, and focusing on anti-litter laws to shift the plastic waste and  
17 pollution crisis to consumers.

18 96. Mobil expanded its production and promotion of plastic products marketed for  
19 single use in the 1980s and 1990s. By the late 1980s, Mobil was leading the plastics industry’s  
20 replacement of paper grocery bags with plastic grocery sacks and led the industry in the  
21 manufacture and sale of pallet-wrap stretch film. Mobil sold more than 20 billion plastic bags a  
22 year as of 1987.

23 97. Mobil enlisted children participating in Boy Scouts of America to sell Hefty  
24 trash and kitchen bags and distribute coupons for future purposes, as a fundraiser for their  
25 scouting troops. A scientist from Exxon met with more than 2,000 students and other community  
26 members to teach the students that plastic packaging is better for the environment than other  
27 materials. The industry also made efforts to disseminate pro-plastics and plastic recycling  
28 information to educators and students. For instance, the Council for Solid Waste Solutions

1 proposed two programs to inform teachers how to educate students about plastics in an effort to  
2 ward off teachers' and students' "efforts to boycott—and even ban—some plastics products,  
3 based on misleading and incorrect information." In another instance, the Vinyl Institute published  
4 a booklet entitled "Plastics in the Waste Stream: Options for Practical Solid Waste Management"  
5 for teachers to utilize.

6 98. Mobil acquired U.S. marketing rights for Baggies food storage bags in 1983,  
7 which it previously produced for Colgate Palmolive. Mobil also developed new films for  
8 wrapping candy bars, chips, and snack foods, changing the way these common products were  
9 packaged for decades in the future. Thirty-five percent of the sales of Mobil's new oriented  
10 polypropylene (OPP), originally designed for packing candy, snacks, and similar items, were for  
11 "products that didn't even exist five years ago." Mobil asserted that OPP was environmentally  
12 friendly because it did not take up much space in landfills. Yet, Mobil's production of OPP was  
13 growing by eight percent a year and Mobil predicted that its worldwide production would exceed  
14 400 million pounds a year by 1994 despite knowing that these products would end up in landfills.

15 99. Mobil continued to expand its lines of single-use plastic dishes, such as Hefty  
16 plates with new designs and patterns, the sturdier "Placesetter" line of dishes, and hinged-lid  
17 polystyrene containers for food items. In 1985, Mobil worked with McDonald's to develop a  
18 menu item based on specialized Mobil polystyrene packaging—a dual-chambered container that  
19 had a "hot side" for the burger itself and a "cool side" for the lettuce and tomato toppings.

20 100. Mobil purchased Tucker Housewares, manufacturer of plastic houseware  
21 products, in 1990. In 1991, Mobil marketed 35 new products, including resins (a substance  
22 typically converted into polymers) and new packaging films. And in 1993, Mobil created a new  
23 line of plastic, microwaveable containers. Mobil also continued to market and expand sales of its  
24 existing product lines, expanding manufacturing capacity for its Hefty bags, plastic grocery bags,  
25 and foam plates.

26 **B. ExxonMobil Knew that Its Promotion and Production of Plastic Products**  
27 **for a Throw-Away Lifestyle Caused a Solid-Waste Crisis Without a**  
28 **Solution.**

101. Exxon's and Mobil's success in promoting disposable products and single-use

1 plastics in the 1950s and 1960s resulted in foreseeable consequences.<sup>53</sup> By the late 1960s,  
 2 ecological concerns threatened the plastics industry.<sup>54</sup> “Ecological concerns increased so steadily  
 3 after the first Earth Day of 1970 that insiders feared the crisis might ‘really end the industry.’  
 4 Plastics’ reputation was worsening even as the stuff itself flowed from refineries and molding  
 5 plants at an ever increasing rate.”<sup>55</sup> In 1971, author Barry Commoner wrote about the  
 6 indestructability of plastics: “it was ‘sobering,’ he wrote, ‘to contemplate the fate of the billions  
 7 of pounds of plastics already produced.’”<sup>56</sup>

8 102. Indeed, by the early 1970s, disposable and single-use plastics were named as a  
 9 cause of the developing plastic waste and pollution crisis.<sup>57</sup> As plastic waste seeped into the  
 10 environment, a worried public began pushing for restrictions and bans. Plastics industry insiders  
 11 denied blame for the plastic waste and pollution crisis. Yet the industry, including Mobil and  
 12 Exxon, realized that they needed to convince the public that the problem was under control—or at  
 13 least make the public *believe* that this was the case.

14 103. Otherwise, Exxon, Mobil, and other plastics producers could face restrictions  
 15 on productions. *Modern Plastics*, a prominent plastics industry journal, warned companies of the  
 16 possibility that “well meaning but misinformed authorities step in with homemade remedies and  
 17 regulations,” and advised industry to figure out its own solution to avoid the pushback on  
 18 plastic.<sup>58</sup> SPI echoed this sentiment and encouraged its members, including Exxon Chemical and  
 19 Mobil Chemical, to band together:

20 We don’t want to sound like the prophet of doom, but we do feel it is necessary to  
 21 alert you to what we, as an industry, might face in the months ahead. It is even more  
 22 important that we unite all our forces to present a solid front in each and every area  
 23 critical to the industry’s continued success.

24 104. The plastics industry engaged in a public relations campaign to improve public

25 <sup>53</sup> Allen et al., Center for Climate Integrity, *supra*, at page 7.

26 <sup>54</sup> Meikle, American Plastic (1995) page 253.

27 <sup>55</sup> *Id.* at page 264 (citing Swissair advertisement as quoted in *Answering the Critics* (May 1980) 57 *Modern Plastics* 34).

28 <sup>56</sup> *Ibid.*

<sup>57</sup> Allen et al., Center for Climate Integrity, *supra*, at page 6.

<sup>58</sup> Meikle, *supra*, at page 265 (quoting Frados, *There’s Something in the Air* (1966) 4 *Modern Plastics* 89).

1 perception of plastic and plastic waste. Mobil and Exxon actively denied, through SPI, that  
2 plastics materials caused environmental pollution or harm.

3 105. Alarming, internal documents from 1973 between SPI and its Public Affairs  
4 Council reveal that the industry called individuals and groups concerned about plastic waste and  
5 harms its “enemies”:

6 [W]e completed the most extensive study of what the various publics think of  
7 plastics.... It was aimed at our environmental problems, of course—better defining  
8 them, determining what **segments of the population are our “enemies”** and where  
9 they get their misinformation.... We have been able to pinpoint problem areas,  
10 problem people and problem press, and have begun our programs to get at the  
11 minority which may mold majority opinion if ignored.

12 106. To assuage the public outcry, Mobil advertised in 1973 that “the plastics  
13 industry is at work on a number of projects designed to turn waste into something useful. One  
14 promising project involves mixing plastic scraps in concrete. The result is a material that’s as  
15 strong as conventional concrete, but up to 15 percent lighter.” The project Mobil referred to was a  
16 bridge reinforced with 30 percent plastic waste that eventually collapsed into a river.

17 107. In the 1970s, Mobil’s Plastics Division formed an “Environmental Protection  
18 Group,” headed by Robert Barrett, to “develop and disseminate facts” about its plastic products to  
19 consumers and environmental groups, in response to what Mobil called “misinformation about  
20 plastic packaging materials.” Specifically, Mobil planned to undermine legitimate concerns by the  
21 public that burgeoning production of single-use plastic products would lead to environmental  
22 harm, by misleading the public into believing that solutions existed to address the waste created  
23 by Mobil’s products. But, as explained below, Mobil knew that the most developed solutions to  
24 addressing plastic waste at the time—incineration and landfilling—risked further harm to the  
25 environment.

26 **1. By the 1970s, the plastics industry was aware of the ocean plastics**  
27 **pollution crisis.**

28 108. The plastics industry, including Exxon and Mobil, was aware of ocean plastics  
pollution by the 1970s, and began attempts to show the public that it was working with nonprofits  
to study the issue. Yet, Exxon’s and Mobil’s public response was to blame others for the issue

1 while not taking any action.

2 109. By the 1970s, scientists were publishing studies and reports on the presence of  
3 ocean plastics pollution. A 1976 study discovered plastic in nine species of seabirds in Monterey  
4 Bay, California.<sup>59</sup> “Industrial pellets predominated in these birds, but they were also found to  
5 contain pieces of food wrap, foamed polystyrene, synthetic sponge and pieces of rigid plastic.”<sup>60</sup>

6 110. The plastics industry was also aware of ocean plastics pollution by the early  
7 1970s. In 1972, Edward J. Carpenter, of Woods Hole Oceanographic Institute, announced that he  
8 had discovered small pieces of plastic in the Long Island Sound “at a density of one to twenty  
9 samples per cubic yard of water.”<sup>61</sup> Carpenter—not wanting to embarrass the plastics industry  
10 and hoping to work together to solve the problem—privately approached SPI’s new executive  
11 vice president, Ralph L. Harding, Jr., to inform Harding that his discovery indicated that a plastic  
12 processor was dumping polystyrene resin in the Long Island Sound.<sup>62</sup> SPI then warily cooperated  
13 with Carpenter to identify the culprit and end the spills.<sup>63</sup>

14 111. Additionally, Exxon, Mobil, and the plastics industry knew as early as the  
15 1970s that plastics break down into the environment. SPI reported that degradation of plastic  
16 occurs when plastic is hit with ultraviolet radiation from sunlight, certain temperatures, moisture,  
17 air, and microorganisms.<sup>64</sup> SPI also acknowledged that “foam products will break down and  
18 ultimately disintegrate with exposure to sunlight and weather.”

19 112. Exxon, Mobil, and other SPI members additionally realized by the 1970s that  
20 the disintegration of plastics into the environment could have potentially serious environmental  
21 implications. As SPI explained, “[w]hen a material degrades, it releases products of  
22 decomposition that could contaminate water supplies.” Moreover, Exxon and Mobil understood  
23 that the consequences of this environmental contamination were unknown, even as both expanded

24 <sup>59</sup> Ryan, *A Brief History of Marine Litter Research*, in Bergmann et al., *Marine*  
25 *Anthropogenic Litter* (2015) page 8 (citing Baltz & Morejohn, *Evidence from Seabirds of Plastic*  
*Particle Pollution of Central California* (1976) 7 *Western Birds* 111).

26 <sup>60</sup> *Ibid.*

26 <sup>61</sup> Meikle, *supra*, at page 268.

27 <sup>62</sup> *Ibid.*

27 <sup>63</sup> *Ibid.*

28 <sup>64</sup> Glauz et al., *Society of the Plastics Industry and Society of Plastics Engineers, The*  
*Plastics Industry in the Year 2000* (Apr. 1973) page 8.

1 their production of plastics, as “[t]he possible biological consequences of widespread,  
2 uncontrolled degradation in this way need to be assessed.”

3 113. In 1973, the American Petroleum Institute, headed by Robert Barrett, studied or  
4 funded publications for the National Academy of Sciences workshop called “Inputs, Fates, and  
5 Effects of Petroleum in the Marine Environment.”<sup>65</sup> While the workshop’s focus was not on  
6 plastics, one paper stated, “[i]n coastal waters, polystyrene spherules are abundant. . . . Bacteria  
7 and polychlorinated biphenyls (PCB’s) are found associated with these particles, and the particles  
8 are ingested by a number of aquatic organisms.”<sup>66</sup> “These studies provided early evidence not  
9 only that plastics were accumulating in the ocean, but also that these plastics could serve as  
10 aggregators of other contaminants, making them more hazardous.”<sup>67</sup> The National Academy of  
11 Sciences also held another workshop in 1973 investigating marine litter, titled Assessing Potential  
12 Ocean Pollutants.<sup>68</sup> The report stated, “[p]lastic objects are prominent in reports of litter  
13 sightings although they are a minor component of the total refuse generated.”<sup>69</sup>

14 114. By the 1980s, SPI and the plastics industry as a whole were well aware of the  
15 ocean plastics pollution crisis.

16 115. By 1987, Congress was drafting bills to address ocean plastics pollution. The  
17 plastics industry was also monitoring congressional and state endeavors to address the issue. This  
18 included a letter SPI sent to its members discussing possible amendments to House of  
19 Representatives bill 940 (“Plastic Pollution Research and Control Act of 1987”) that would  
20 require the U.S. Environmental Protection Agency (EPA) to report information to Congress,  
21 including: “(1) an identification of the types and classes of plastic materials in the marine  
22 environment which are from land-based sources [and] (2) steps being taken by EPA to reduce the  
23 amount of plastic materials that enter the marine environment from those sources.”

24 116. The plastics industry was aware of ocean plastic pollution, but failed to offer

25 <sup>65</sup> Center for Internat. Environmental Law, *Fueling Plastics: Plastic Industry Awareness of*  
26 *the Ocean Plastics Problem* (2017) page 2.

26 <sup>66</sup> *Ibid.*

27 <sup>67</sup> *Ibid.*

27 <sup>68</sup> *Ibid* (citing Nat. Academy of Sciences, *Assessing Potential Ocean Pollutants* (1975) p.  
28 423).

<sup>69</sup> *Id.* at pages 2-3.

any workable solutions. Acknowledging the growing problem, SPI testified in 1987 at a U.S. Senate hearing on plastics pollution in the marine environment. SPI's Vice President of Government Affairs, Lewis R. Freeman testified that "SPI recognizes that the problem of proper disposal, particularly in the oceans, can sometimes create environmental problems." The Vinyl Institute, "as a division of [SPI], . . . [also] participate[d] in a number of industry wide programs established to address the issue of plastics in solid wastes, including the issue of marine pollution."

117. By 1988, the ocean plastics pollution crisis was so pronounced that SPI collaborated with the Center for Marine Conservation and the National Oceanic and Atmospheric Administration to publish "A Citizen's Guide To Plastics In The Ocean: More Than A Little Problem." The guide explained that the "[p]lastic debris found in the marine environment generally falls into two categories: manufactured plastic articles and plastic resin pellets." Further, the guide admitted that "[p]lastic trash in the ocean poses a growing threat for marine wildlife, and a problem for communities and use groups who depend on the ocean."

118. In the 1990s, the fact that plastics were escaping into the ocean was receiving increased attention. In 1990, SPI met with the EPA about EPA's concerns that plastic pellets were found in various U.S. coastal environments, suggesting wide contamination in the marine environment. EPA requested SPI's assistance surveying various plastics manufacturers, processors, and pellet transporters to assess how plastics are making their way into the environment. SPI planned to meet to discuss potentially taking voluntary action to address the issue and assumed that EPA would otherwise force the industry to do so.

119. Shortly after this warning, SPI launched "Operation Clean Sweep" to encourage the plastics industry to prevent losing pellets in the environment. Exxon hosted an "Operation Clean Sweep" conference on this issue in 1992. But the initiative was largely performative, only requiring participating companies to "watch videos, sign a form and promise not to lose any pellets," without any follow-up measures to ensure the project's success.<sup>70</sup>

<sup>70</sup> Sullivan, *Big Oil Evaded Regulation and Plastic Pellets Kept Spilling*, NPR (Dec. 22, 2020) <<https://www.npr.org/2020/12/22/946716058/big-oil-evaded-regulation-and-plastic-pellets-kept-spilling>> (as of July 29, 2024).

120. Mobil published an ad in *The New York Times* in 1994 titled “The coast (should be) clear.” While Mobil admitted that “[m]illions of pounds of debris wind up on beaches,” it continued to blame others for the debris, claiming “[d]ebris can come from the sea—trash dropped overboard from fishing vessels or ships—or it can come from the land-drainage system overflows or beach-goers.” Mobil discussed its “support” of a nonprofit organization, the Center for Marine Conservation, since 1986 by donating “several million trash bags to carry off the debris.”

**2. Exxon and Mobil first proposed landfilling and/or incineration of plastic waste.**

121. Against immense public backlash to plastic litter and under threat of regulation, the plastics industry proposed two potential “solutions” in the 1970s: landfilling and incineration. Landfilling addressed plastic litter and solid waste, while incineration addressed the public’s unease with making plastic packaging from petrochemicals during the 1970s energy crisis. Perceiving an urgent need to quell public outcry, Exxon and Mobil falsely claimed that plastic waste was being handled. Exxon and Mobil evidently calculated that it was safer to assert that landfilling and incineration were both capable of safely addressing plastic waste—even while knowing this was not the case—rather than risk being forced to slow their growing plastics businesses.

122. Throughout the 1970s, SPI and Mobil touted landfilling as a solution to the solid-waste crisis and plastics as environmentally beneficial. The President of SPI said plastics made ideal landfill material because “they don’t biodegrade,” they “just sit there.” SPI also reported that “non-degradable plastics contribute to the stability of landfill, in contrast with many other degradable materials which create problems such as settling, leaching, water pollution, and production of methane gas.” Mobil echoed this message in multiple publications. “[P]lastic doesn’t rot. It doesn’t produce methane gas that can cause fires and explosions or contaminants than can pollute underground waters. In fact, plastic makes a good fill material.” Mobil also advertised that “non-degradable polyethylene bags offer environmental advantages when disposed of in dumps and landfills.” Similarly, Mobil publicized that polystyrene foam in landfills

1 “compacts easily and will not contribute to either air or water pollution.”

2 123. Along with landfilling, the industry, including Exxon and Mobil, favored  
 3 burning plastic waste, known as waste-to-energy incineration, as a means to address solid waste  
 4 and the energy crisis,<sup>71</sup> even though this form of disposal involved clear environmental  
 5 consequences, such as air pollution. According to a report produced for SPI in 1973, “The  
 6 disposal of plastics via energy recovery and environmental incineration are two objectives that  
 7 really should be one. Use of the energy generated during incineration of a plastic product is  
 8 merely the ultimate in using petroleum in an effective manner for the public good.” SPI’s  
 9 President further explained, “we’d rather see plastics . . . go into a municipal power incinerator  
 10 which was a power plant.” In 1970, SPI published a paper stating that incineration is “the most  
 11 feasible method of solid waste disposal now, and that it will be for the foreseeable future.”

12 124. According to Mobil, “[a]s we run out of space for landfills, municipal  
 13 incineration will become an increasingly important means of waste disposal. The new incinerators  
 14 could also serve as power plants, using trash as fuel to generate electricity. And petroleum-  
 15 derived plastics will improve the quality of that fuel.”

16 125. To support incineration efforts, Mobil falsely reported that the incineration of  
 17 plastic waste was not harmful. On July 21, 1987, Mobil published an advertisement in the *Los*  
 18 *Angeles Times* titled, “*When it comes to solid waste, America’s policies are wanting,*” which  
 19 claimed that “[i]ncineration may be the best hope [to address plastic waste], especially for some  
 20 areas. While some environmentalists claim that burning trash may produce dioxins and other  
 21 pollutants, and cause an ash disposal problem, modern incinerators practically eliminate  
 22 emissions.” On February 23, 1988, Mobil published an advertisement in the *Sacramento Bee*  
 23 titled, “Foam fast-food containers: The scapegoat, not the problem,” which falsely claimed that  
 24 “[p]roper incineration of foam produces virtually nothing but harmless carbon dioxide and water  
 25 vapor.” In a June 26, 1988 *San Francisco Examiner* article titled “*War of words over foam*  
 26 *packaging,*” the author notes that “Mobil scientists said foam does not give off harmful chemicals  
 27 when burned properly.” Mobil publicly claimed “polyethylene bags can be burned in existing

28 <sup>71</sup> Allen et al., Center for Climate Integrity, *supra*, at page 8.

1 municipal incinerators with no operating pollution problems . . . even at triple their normal load,  
2 plastics do not increase air pollution or cause operating problems in incinerators.” Mobil further  
3 publicized that polystyrene foam, “when incinerated, [ ] will not pollute the air” and that the  
4 incineration of both polystyrene and polyethylene bags produces mainly carbon dioxide and water  
5 vapor.

6 126. But notwithstanding these representations, the plastics industry was aware that  
7 incineration of plastics led to increased production of smoke, air pollution, and deterioration of  
8 metal parts of the incinerators themselves. In the industry’s internal discussions, Exxon and  
9 Mobil, through their agents, servants, alter-egos and/or trade groups, admitted that burning plastic  
10 would likely cause environmental harms. A report presented at an SPI 1972 annual meeting stated  
11 there were “no prospective customers for the steam” generated through plastic incineration.  
12 Despite heralding incineration as the solution to the plastic waste problem, the industry knew  
13 there were no markets for energy recovered through incineration and that it would cause air  
14 pollution.

15 **C. In Response to Public Pressure Seeking an End to Plastic Waste,**  
16 **ExxonMobil Misled the Public to Believe That Mechanical Recycling Was**  
**a Sustainable Solution.**

17 127. For decades, ExxonMobil aggressively touted mechanical recycling—  
18 recovering plastic waste by mechanical processes such as sorting, washing, drying, grinding,  
19 heating, re-granulating and compounding—to calm public and legislative pressure against the  
20 plastic waste and pollution crisis. ExxonMobil promoted mechanical recycling through its  
21 predecessors Exxon Chemical and Mobil Chemical, and through activities of its agents, servants,  
22 alter-egos and/or abettors. Meanwhile, internal discussions paint a vastly different picture—  
23 ExxonMobil always knew that recycling would never solve the plastic waste and pollution crisis  
24 and never intended to fund long-term recycling projects. Nonetheless, ExxonMobil sold the false  
25 promises of mechanical recycling to fight legislation, distract the public, and blame consumers for  
26 the plastic waste and pollution crisis.

27 ///

28 ///

1                   **1. Exxon and Mobil promoted mechanical recycling as the answer to**  
 2                   **plastic waste and pollution in the 1970s but knew mechanical**  
 3                   **recycling was not a feasible method to handle most plastic waste.**

4           128. ExxonMobil’s promotion of incineration and landfilling did not quell public  
 5 opposition to plastic waste, and legislatures and municipalities nationwide continued to consider  
 6 restrictions and bans. In response, ExxonMobil shifted its public relations strategy to promote  
 7 mechanical recycling as the solution to the plastic waste and pollution problem, and employed a  
 8 threefold strategy to quiet public concern and avoid regulation: first, widely disseminate  
 9 deceptive messaging about the supposed efficacy of recycling through advertisements and  
 10 lobbying; second, invest in short-term pilot projects to “prove” that recycling works and promise  
 11 that it will scale at some indefinite time in the future; and, finally, once public attention dwindles,  
 12 divest from recycling ventures and continue to produce more plastics, returning to business as  
 13 usual.

14           129. Exxon Mobil and the plastics industry knew, however, that recycling was not a  
 15 feasible solution to the plastics waste and pollution crisis. Referring to recycling at an SPI annual  
 16 meeting in 1972, one member admitted:

17           Gentlemen, before going any further, let me say that despite the extreme pressures on  
 18 the plastic industry to initiate recycling projects, I cannot in good faith recommend  
 19 *any* program today which I feel would be worthwhile without creating the risk of a  
 20 public relations backlash or getting way over our heads financially.

21           130. SPI also admitted that it did not have the techniques or end markets necessary to  
 22 recycle plastics from municipal refuse: “Thus, if we were forced to set up redemption centers and  
 23 take back all of our containers, we would have to turn them over to the Sanitation Department for  
 24 disposal. Currently, there is no economic value for used plastic containers.”

25           131. Similarly, an internal report that SPI and the Society of Plastics Engineers  
 26 sponsored in 1973 stated that “[w]hen plastics leave fabrication points, they are almost never  
 27 recovered. There is no recovery from obsolete products.” SPI further reported that, “there are no  
 28 effective market mechanisms for trade in contaminated, mixed plastics.” Industry periodicals  
 repeated this sentiment: “Recycling of wastes is currently believed to be the most acceptable form  
 of disposal; however, this route is known to be especially difficult for plastics” in part because

1 blended plastics result in degraded quality of plastic after recycling.

2 132. Recycling most plastics was technologically infeasible, as the plastics industry  
3 knew, and subsequent scientific research would confirm. “When recycled, some of the plastic can  
4 be remade into similar products; however, most is typically downcycled into a product of a lower  
5 quality and is unable to displace products made from virgin plastics [citation omitted].”<sup>72</sup> Even  
6 PET, the most easily-recycled type of plastic, quickly degrades through the recycling process.

7 133. Exxon and Mobil have known about the limitations of plastics recycling for  
8 decades. In 1986, the Vinyl Institute, a division of SPI, explained in an internal draft that  
9 “recycling cannot be considered a permanent solid waste solution, as it merely prolongs the time  
10 until an item is disposed of. At that point, recycled products also become MSW [municipal solid  
11 waste] components.”

12 134. At a Vinyl Institute meeting that same year, members discussed a recent study  
13 on the economics of recycling. “This study indicates that based on our economic system, on the  
14 cost of fuel and transportation, on the economic benefit of downstream markets, on the low cost  
15 of plastic feedstocks and the even lower cost of off grade-off spec plastic feedstocks, recycling is  
16 not and will never be commercially viable unless it is significantly subsidized by a government  
17 entity.”

18 135. Further, the industry knew that recycling post-consumer plastic was costly and  
19 difficult, and had little or no end market or economic value, making virgin plastic a cheaper  
20 option than recycled plastic. As Mobil stated in its “Primer”:

21 To get just a small amount of the material you want, you have to sift through tons of  
22 trash you don’t want. And when you get enough of it, you have to ship it to a plant  
23 where it can be scrubbed. Or purified. Or refined. Or upgraded. And then—maybe—  
24 you’ll have a raw material almost as good as the nice, clean stuff a supplier can  
25 deliver to your factory door for a lot less money. Finally, not all plastic submitted for  
26 recycling actually makes it through the recycling process—some is lost due to process  
27 inefficiencies and yield loss. The National Association for PET Container Resources’  
28 (NAPCOR) report from 2018 estimated that nearly a third (~30%) of the volume of  
plastic bottles collected for recycling were lost during the mechanical recycling  
process.

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<sup>72</sup> Moran et al., San Francisco Estuary Institute, A Synthesis of Microplastic Sources and Pathways to Urban Runoff (Oct. 2021) page 76.

136. Recycling plastics also introduces new toxins into the plastics themselves, which then become part of the new plastic products. Plastics processed for recycling absorb harmful chemicals they encounter in the waste stream, resulting in contaminated recycled products. In addition, the recycling process itself creates toxins when the plastics are heated.

137. Plastics specifically cannot be re-recycled into food-safe products, even if their original use was food-safe, as the mechanical recycling process introduces new toxins into the plastic.<sup>73</sup> European researchers have also discovered toxic flame retardants in plastic food wrap made with recycled plastics.<sup>74</sup> The recycled plastics are thus only acceptable for lower value uses and virgin plastic must be used for food-safe products.

138. Toxins created by the recycling process also create concerns for other products made with recycled plastics, including children's toys. Numerous studies have demonstrated high levels of toxic flame retardants,<sup>75</sup> dioxins,<sup>76</sup> and other harmful chemicals<sup>77</sup> in children's toys made with recycled plastics and/or recycled pellets that may be made into toys and other children's products.

**2. Opposition to plastic waste in the late 1980s and early 1990s posed a threat for Exxon's and Mobil's businesses, leading Exxon and Mobil to aggressively promote recycling, despite knowing that recycling was not a viable solution to the plastic waste and pollution problem.**

139. Despite ExxonMobil's knowledge that mechanical recycling would not be able to resolve the massive amount of plastic waste generated, Exxon and Mobil sold plastic recycling to the public as the key solution to the plastic waste and pollution crisis. These representations started as early as the 1970s. Mobil deceptively publicized that "waste can be disposed of by recycling. . . . Recycling sounds like an ideal solution. It would get rid of a lot of the trash and

<sup>73</sup> See Environment and Climate Change Canada, Assessing the State of Food Grade Recycled Resin in Canada & the United States (Oct. 2021).

<sup>74</sup> Puype et al., Evidence of Waste Electrical and Electronic Equipment (WEEE) Relevant Substances in Polymeric Food-Contact Articles Sold on the European Market (2015) 32 Food Additives & Contaminants 410.

<sup>75</sup> Guzzonato et al., Evidence of Bad Recycling Practices: BFRs in Children's Toys and Food-Contact Articles (2017) 19 Environmental Science: Processes & Impacts 956.

<sup>76</sup> Petrlik et al., Internat. Pollutants Elimination Network (IPEN), Plastic Waste Disposal Leads to Contamination of the Food Chain (June 2021).

<sup>77</sup> Brosché et al., Internat. Pollutants Elimination Network (IPEN), Widespread Chemical Contamination of Recycled Plastic Pellets Globally (Dec. 2021).

1 would cut down on the need for dumps, landfills, and incinerators. And it would conserve virgin  
2 raw materials.”

3 140. In a 1971 newspaper article, an environmental engineer at Mobil Chemical  
4 suggested publicly that recycling was the “probable answer,” despite the fact that at the time less  
5 than two percent of municipal waste was being recycled. Mobil deceived the public by equating  
6 post-industrial recycling feedstock (never-used scrap from the factory floor) with post-consumer  
7 recycling feedstock (which is more likely to be contaminated or lower quality after consumer  
8 use), telling the public that recycling “is technically possible” but citing only to post-industrial  
9 practices. In a similar vein, Mobil also publicly claimed that “[i]t is possible to recycle  
10 polyethylene bags,” even while it internally acknowledged that recycling post-consumer bags  
11 specifically was “uneconomical” and therefore would not actually occur.

12 141. In the late 1980s, the plastics industry was “under fire” due to the increased  
13 public sentiment against plastic, and worked to convince the public that recycling was working in  
14 order to allow the industry to continue making plastic products. But, in truth, for the industry  
15 “[t]here was never an enthusiastic belief that recycling was ultimately going to work in a  
16 significant way.”<sup>78</sup>

17 142. In furtherance of their campaign to convince the public that recycling was the  
18 answer to the plastics waste and pollution crisis, Exxon and Mobil, alongside other large  
19 petrochemical companies, formed the Council for Solid Waste Solutions (the Council) in 1988.<sup>79</sup>

20 143. After Exxon, Mobil, and others in the industry formed the Council, they pushed  
21 the plastics recycling message with increased coordination and seriousness. The Council spent  
22 millions of dollars on advertisements to herald recycling as the solution to plastic waste in hopes  
23 to change public perception. For example, the Council took out a 12-page advertisement in the  
24 July 17, 1989 edition of *Time* magazine exclaiming, “The URGENT NEED to RECYCLE.” But  
25 unlike most advertisements, this one did not sell a specific product. Rather, it read more like a  
26

27 <sup>78</sup> Sullivan, *Plastic Wars: Industry Spent Millions Selling Recycling—To Sell More*  
28 *Plastic*, NPR (Mar. 31, 2020) <<https://www.npr.org/2020/03/31/822597631/plastic-wars-three-takeaways-from-the-fight-over-the-future-of-plastics>> (as of July 29, 2024).

<sup>79</sup> Council for Solid Waste Solutions, *The Urgent Need to Recycle* (July 17, 1989) *Time*.

1 public service announcement issued by an official-sounding entity, the “Council for Solid Waste  
2 Solutions.” On June 29, 1989, Larry Thomas, President of SPI, sent a letter to SPI’s members  
3 explaining that the *Time* advertisement would “reach a total *Time* readership of 10 million . . . this  
4 is an important audience for us. It also is an appropriate venue. It was *Time*, after all, that named  
5 as its most recent ‘Man of the Year’ the planet earth wrapped in plastic”—referencing the cover  
6 of the January 2, 1989 edition of *Time*, which did, indeed, name the “Endangered Earth” “Planet  
7 of the Year” with a picture of the Earth wrapped in plastic.

8 144. The Council covered a myriad of topics in the *Time* advertisement, including  
9 the alleged environmental benefits of plastic packaging, along with: how Americans have come to  
10 depend on plastics; recycling as a smart solution for plastic waste; the Council’s and members’  
11 efforts to promote recycling and recycling technology; degradable plastics; the plastics industry’s  
12 intent to accelerate recycling; the uses for plastic “lumber;” and information about the Council  
13 itself.

14 145. A July 1989 article in *Plastics Newsbriefs*, an industry-focused publication of  
15 SPI, explained that because “most Americans believe plastics are not recyclable . . . [t]he *Time*  
16 piece is designed to show plastics as part of the solution, instead of the problem.”

17 146. Further, in a speech at a 1992 industry conference, SPI’s Partnership for Plastics  
18 Progress Vice President Donald Shea stated, “[i]f we are to survive the challenges of the so-called  
19 ‘green revolution,’ we must adapt to a new paradigm—a new way of doing business that will  
20 ensure the continued growth and expansion of the plastics industry. Shea then discussed the  
21 public’s growing concerns “about the impact of modern lifestyles on the environment” and how  
22 “[c]onsumers are rethinking the products they use and the manufacturing technologies that  
23 produce them.” The public’s negative perception of plastics worried SPI, as it was aware that  
24 “[p]ublic perception becomes legislative reality.” SPI decided to convince consumers that they  
25 could continue to purchase and use the industry’s plastic products without compromising their  
26 environmental concerns, by convincing the consumers that those plastics could be recycled. SPI  
27 did this despite knowing that the infrastructure for recycling did not exist and that, given the  
28 economic unprofitability of recycling post-consumer material, it would likely never exist on a

1 scale sufficient to handle the volume of plastics products the industry was producing.

2 147. The Council convinced Americans that recycling was the key to allow  
3 Americans to continue consuming the plastics that—through the industry’s own efforts—had  
4 become an essential component of everyday life. As SPI’s 1989 *Time* advertisement stated, “[t]he  
5 growing movement to recycle plastic waste into new products holds a dual benefit for our  
6 consumer society. First, plastics are less expensive than most other materials. Second, the  
7 conversion of used plastics into new longer-life products reduces the volume of plastics in the  
8 ever-growing municipal solid waste stream.”<sup>80</sup> But as Exxon, Mobil, and other members of SPI  
9 knew, mechanical recycling was not happening, and would likely not happen at a sufficient rate to  
10 meaningfully limit the amount of plastic that would be disposed of in other ways, particularly due  
11 to the glut of new, cheaper virgin plastic still being produced.

12 148. Meanwhile, in 1989, Mobil misleadingly promised the public that it was  
13 “venturing into recycling mainly out of a sense of environmental concern. ‘We are responsible for  
14 that segment of the waste stream, so we’re going to see that it’s disposed of consistent with’ the  
15 federal [EPA’s] recommendations.”

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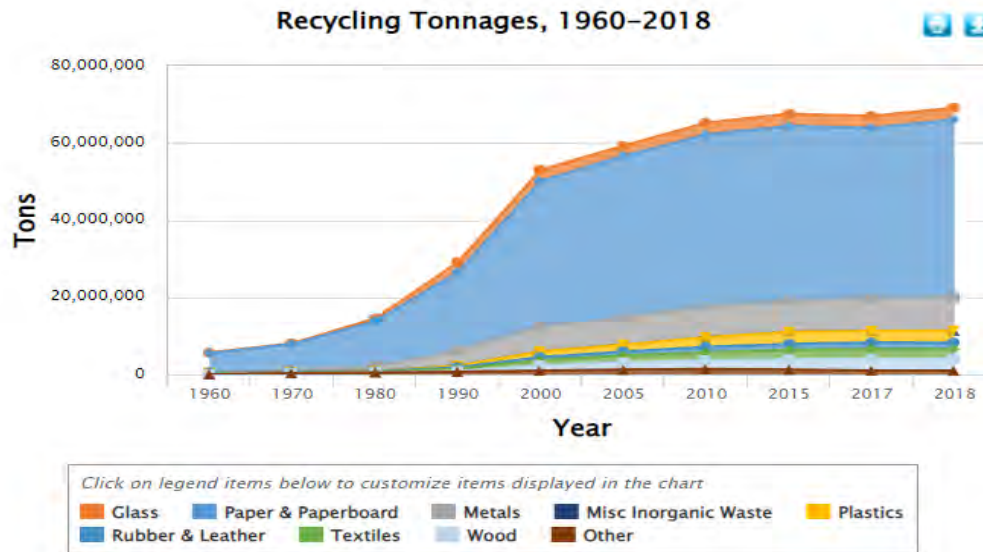
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28 <sup>80</sup> *Id.* at page 17.

149. At the time that Mobil made these statements, the national plastics recycling rate was between just one and two percent. See Figure F.

**Figure F: National Recycling and Composting Rates from 1960 to 2018<sup>81</sup>**



**Recycling and composting as a percentage of generation**

	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
<b>Paper and Paperboard</b>	17%	15%	21%	28%	43%	50%	63%	67%	66%	68%
<b>Glass</b>	2%	1%	5%	20%	23%	21%	27%	28%	25%	25%
<b>Plastics</b>	Neg.	Neg.	<1%	2%	6%	6%	8%	9%	9%	9%
<b>Yard Trimmings</b>	Neg.	Neg.	Neg.	12%	52%	62%	58%	61%	69%	63%
<b>Lead-acid Batteries</b>	Neg.	76%	70%	97%	93%	96%	99%	99%	99%	99%

"Neg." means less than 5,000 tons or 0.05 percent.

150. Exxon similarly recognized in a 1991 internal document that “[t]he industry needs to improve the public perception of plastics, which are widely regarded as a major contributor to the solid waste disposal problem.”

151. But Exxon, Mobil, and the industry knew that plastic recycling would only be minimally successful because, for most plastics, the costs of recycling or recovering used

<sup>81</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes, and Recycling* <<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#Trends1960-Today>> (as of July 29, 2024).

1 materials was higher than the cost of virgin equivalents.

2 152. The industry did not want recycling to succeed: “Virgin resin companies see  
3 recycling as ‘internal competition. They don’t want to see it succeed.’”<sup>82</sup> Exxon and Mobil had  
4 resources to invest in recycling but no financial incentive to do so. Their profits rely on the sale of  
5 virgin plastics, the products of fossil fuels.<sup>83</sup>

6 **a. Exxon and Mobil promised lofty plastic recycling targets that**  
7 **they knew were unachievable.**

8 153. Exxon and Mobil, through the Council for Solid Waste Solutions (Council),  
9 kicked off the 1990s by announcing a major initiative to promote plastics recycling. In or around  
10 early 1990, the Council announced a \$13.2 million, 12-month long program to fund research and  
11 promote plastics recycling. One highly publicized part of the program launched by the Council  
12 was the “Blueprint for Plastics Recycling,” a plan through which the Council would encourage  
13 recycling, including by encouraging communities to develop plastics recycling programs. The  
14 centerpiece of the Blueprint was the Council’s goal to increase the U.S. plastic recycling rate to  
15 25 percent by 1995, despite the fact that just over one percent of plastics was being recycled as of  
16 1990, when the program was announced.

17 154. The Council announced it would spend \$20 million per year to develop  
18 recycling capacity by providing information to communities about recycling, buying recycled  
19 plastic, and other recycling investments. However, the Council recognized that these investments  
20 were insufficient to meet the 25 percent recycling goal. In fact, the Council knew from the  
21 beginning that it would not meet the goal to increase the plastic recycling rate to 25 percent by  
22 1995, but “[t]wenty-five was felt to be the lowest rate that would be acceptable to the general  
23 public and the environmental community.” Despite some industry representatives believing 10  
24 percent to be a more reasonable goal, the Council made sure that the 25 percent stated goal was  
25 well-known.

26 155. Despite knowing its deficiencies, Exxon and Mobil continued to invest heavily

27 <sup>82</sup> Kirschner, *Recycling’s Rough Adolescence*, Chemical & Engineering (C&E) News (Nov.  
28 4, 1996) page 20.

<sup>83</sup> Freinkel, *supra*, at pages 192-193 (citing interview with Howard Rappaport).

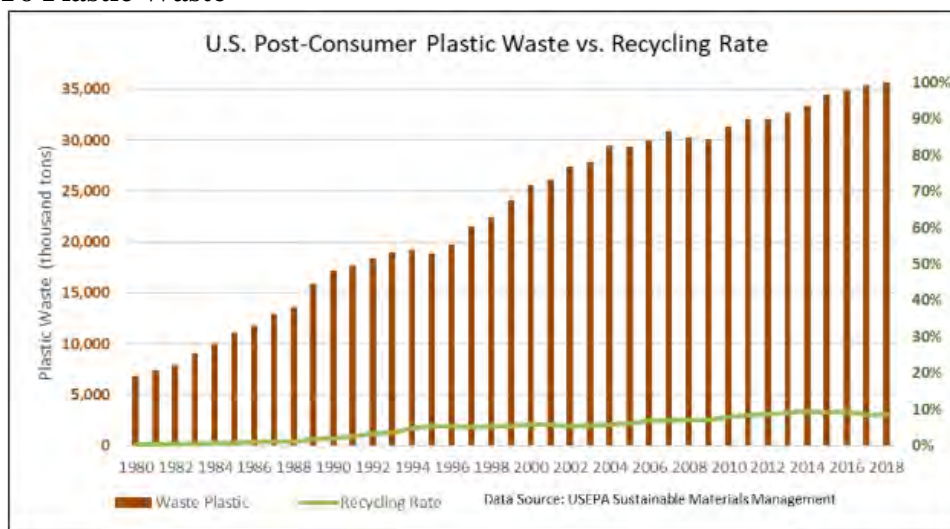
in marketing recycling to the public as the solution to plastic waste. A group of major resin makers that included Exxon and Mobil spent \$40 million to promote curbside recycling.

156. The millions of dollars spent promoting recycling as the solution to plastic waste dwarfed Exxon's and Mobil's actual investments in recycling infrastructure. While the Council—comprised of a small number of petrochemical companies including Exxon and Mobil—publicly announced a goal to increase the plastic recycling rate to 25 percent, neither Exxon nor Mobil invested significant funds to increase the feasibility of the alleged goal.

157. The plastics industry concurrently invested in virgin resin, creating an oversupply that drove the price of virgin plastic down. Inevitably, the low price of virgin plastic made recycled plastic even more uncompetitive. Between 1990 and 1996, for every pound of plastic packaging that was recycled, an average of four pounds of virgin plastic was produced.

158. In 1991, SPI and the Council for Solid Waste Solutions announced a goal to raise the post-consumer plastic bottle and containers recycling rate to 25 percent by 1995, but abandoned the goal, which was unmet, in 1995. Meanwhile, the plastic recycling rate in the U.S. has never surpassed nine percent (when massive amounts of plastic waste was exported to China), despite the exponential growth of plastic, meaning more and more plastic fails to be recycled year over year, as shown in Figure G, below.

**Figure G: Waste and the Plastics Industry's Alleged Dedication To Make Recycling A Solution To Plastic Waste<sup>84</sup>**



<sup>84</sup> Beyond Plastics and The Last Beach Cleanup, The Real Truth about the U.S. Plastics Recycling Rate (May 2022) page 4.

159. The plastics industry, including Exxon and Mobil, recognized, however, that the public was demanding action on the solid waste crisis. In 1991, Mobil published advertisements in national newspapers claiming that the company had “spent hundreds of millions of dollars on environmental efforts” in the last year, including plastic recycling. Mobil informed the public that it was working with supermarket chains to collect plastic shopping bags, which would be recycled in Mobil’s plants. These efforts, Mobil explained, “add[] to the momentum the plastics industry has attained as a responsible recycler.”

160. At the same time, a 1991 report by the Congressional Research Service noted that serious obstacles to mechanical recycling existed at the time in the areas of resin identification, collection, and sorting, and that according to interviews with industry executives that it made “little sense” to recycle plastics. But the industry nonetheless carried forward, as “the public is generally aware, partly thanks to industry information efforts, that plastics can be economically recycled as materials.” SPI internally explained its contradictory practice was intended to appease the public and combat anti-plastic sentiment:

The public fully embraces only one of the key elements of the integrated waste management package: recycling. Public opinion research conducted for the Council repeatedly has shown that Americans will not support building additional waste-to-energy or landfill capacity until a major recycling effort has been made. . . . **We have got to meet the public on its own terms if we are to secure the acceptance of our products.** In the short term, that means pursuing recycling to the best of our abilities—without promising more than can be economically or environmentally delivered.

Exxon, Mobil, and its industry trade groups knew the public would only accept plastic if they thought it was sustainable. As a result, they promoted recycling as the mechanism to make plastic appear sustainable. SPI stated internally, “we must adapt to a new paradigm—a new way of doing business that will ensure the continued growth and expansion of the plastics industry.” The new way of doing business included fooling the public into believing that recycling plastic would solve the plastic waste and pollution problem while increasing the amount of virgin plastic sold to the public.

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**b. Exxon and Mobil sought buy-in for their recycling goals by attempting to convince consumers that they were to blame for the plastics crisis.**

161. A crucial part of Mobil's and Exxon's strategy to promote plastic recycling was convincing consumers that they were responsible for the proliferation of plastic waste through their own personal habits, rather than through Mobil's and Exxon's efforts to produce an increasing number of plastic products designed for single-use. This strategy shifted attention from Mobil's and Exxon's creation of the plastic to consumers' behavior. Keep America Beautiful, a non-profit organization created by the packaging industry, campaigned against littering and blamed individuals, the "litter bugs," for trash that entered the environment. Keep America Beautiful's focus on littering diverted the public's attention toward individual misbehavior, while at the same time allowing industry to continue producing single-use packaging that, even when properly entered into the waste stream, contributed significantly to plastic pollution.

162. Mobil published advertisements reminding consumers of their role. One in the *Los Angeles Times* stated: "[T]here are no heroes or villains. Every household, like every store or factory, produces its share of refuse. All should shoulder a fair share of the cost of removal."

163. In another, published in the *Sacramento Bee* in 1988 entitled "Foam fast-food containers: The scapegoat, not the problem," Mobil said: "[T]he [plastic waste] problem has to be attacked logically and scientifically, without a helter-skelter rush to anoint villains. For the fact is, there are no villains, and we're all 'guilty.' Every household, every business, every office—indeed, every American—contributes to the refuse stream every day. To zero in on the fast-food business, or the plastics industry is to engage in scapegoating, not problem-solving."

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164. While Exxon and Mobil waged an ongoing campaign to convince the public that plastics recycling would solve the plastic waste and pollution problem, they also continued shifting the blame for dismal plastic recycling rates onto the public:

Recycling projects initiated by the plastics industry have been announced in many parts of the country. And the opportunities for more plastics recycling ventures are nearly limitless. All that remains to make widespread recycling of plastics a reality is public sector support: more communities and cities must develop programs for separation and collection of recyclable materials. Only then will we be able to ensure a reduction of the growing waste stream.<sup>85</sup>

165. In 1992, the American Plastics Council (APC), of which Exxon and Mobil were members, pledged to educate consumers on “their role in meeting environmental challenges.”

166. Exxon, Mobil, and others in the industry recognized that the promotion of recycling was key to allowing consumers to feel comfortable continuing to purchase and dispose of their plastic products—the other side of the coin to blaming consumers for plastic waste. Recycling was a “guilt eraser” that allowed the public to consume plastic products and believe that through recycling, they had the power to ensure that plastic materials would not become pollution and would have a new life as useful products.<sup>86</sup>

**c. Exxon and Mobil, through the Society for the Plastics Industry, created and promoted the chasing arrow symbol despite knowing that it was deceiving the public into thinking that all plastics are recyclable.**

167. The “chasing arrows” symbol, a logo showing three arrows each folded in the middle and arranged in a triangle was invented in 1970 by a student who won a contest held by a box manufacturer to promote recycling of paper.<sup>87</sup> The chasing arrows symbol is now strongly associated with recycling, and consumers usually assume that the symbol identifies items that can be recycled.<sup>88</sup>

168. In or around 1988, in an attempt to stave off regulation, SPI modified and

<sup>85</sup> Council for Solid Waste Solutions, *supra*, at page 22.

<sup>86</sup> Freinkel, *supra*, at page 162 (citing Roger Bernstein of the American Chemistry Council).

<sup>87</sup> Che, *His Recycling Symbol Is Everywhere. The E.P.A. Says It Shouldn't Be.*, N.Y. Times (Aug. 3, 2023) <<https://www.nytimes.com/2023/08/07/climate/chasing-arrows-recycling-symbol-epa.html>> (as of July 29, 2024).

<sup>88</sup> *Ibid.*

1 adopted the chasing arrow symbol for plastic containers, including a number in the middle of the  
2 three arrows, ranging from 1 to 7, that would correspond to the type of resin the item was made  
3 from. This placed responsibility for plastic waste on individual consumers, who would need to  
4 know the capabilities of their local recycling facility to recycle each resin number at all times and  
5 in all locations, as facilities vary in which resins they accept for recycling. Indeed, there were and  
6 still are no western U.S. recycling facilities that can process resin numbers 3 to 7. Nevertheless,  
7 SPI's Council on Plastics and Packaging in the Environment (COPPE) assured lawmakers that the  
8 codes would "help guide recyclers and promote the practice" by showing the type of plastic that  
9 composed an item. Since "[a]lmost all recycling markets are designed to handle one kind of  
10 plastic at a time," the industry needed to demarcate the type of plastic on their products in order to  
11 group specific types together for recycling. While demarcating the type of plastic on their  
12 products makes sense, the use of the chasing arrows, universally understood as the recycling  
13 symbol, was unnecessary and misleading.

14 169. Indeed, in practice, the symbol led consumers to believe that all labeled plastic  
15 items were recyclable, due to the chasing arrows symbol. In truth, however, most plastic resins  
16 were not able to be recycled because there were no recycling facilities that were capable of  
17 recycling most resin numbers.

18 170. Despite hijacking and promoting the chasing arrows symbol as a purported  
19 boost to plastic recycling, the plastics industry knew that the resin identification codes would not  
20 improve plastic recycling. Instead, the coding was intended to hide the limits of recycling, delay  
21 regulation, and pass responsibility for plastic waste onto consumers. According to the Vinyl  
22 Institute in 1986, "efforts to simplify source separation by labeling containers as to their material  
23 makeup—a solution growing in popularity with regulators—are of limited practicality."

24 171. According to Coy Smith, former National Recycling Coalition<sup>89</sup> board member,  
25 SPI offered the resin codes to state and local governments as a purported way to address the  
26 government's concerns about solid waste while allowing their constituents continued access to

27 \_\_\_\_\_  
28 <sup>89</sup> National Recycling Coalition is a non-profit advocacy organization of recyclers, nonprofits, and other groups. See National Recycling Coalition, What We Do, 2023 (2023).

1 disposable products. The industry “convinced [] states to pass laws—and they did this very  
 2 quietly—they passed laws that required that symbol with the number on it be put on plastic  
 3 containers sold in that state.... [F]or most states they did it in, recyclers didn’t even know it  
 4 happened.”<sup>90</sup>

5 172. In states like Iowa, Minnesota, and Ohio, the industry in quick succession  
 6 managed to convince legislators to mandate plastic container coding and other measures meant to  
 7 promote plastic recycling, in exchange for abandoning bills prohibiting some or all disposable  
 8 plastics. By the mid-1990s, SPI’s resin code symbol was legally mandated in 39 states. Even the  
 9 California chasing arrows bill, Assembly Bill 3299, introduced on February 12, 1988, by  
 10 Assemblymember Killea, was originally written to “require plastic containers and packaging to be  
 11 manufactured of recyclable or biodegradable plastic.” That bill language was removed and the  
 12 bill was amended in the State Assembly on March 22, 1988, to require only a molded label on  
 13 plastic products indicating the plastic resin code.

14 173. As intended, the plastic resin identification codes confused consumers, who  
 15 believed that any item containing the chasing arrows symbol was recyclable. Two surveys in  
 16 different states showed that between 53 and 74 percent of consumers believed the presence of the  
 17 symbol on a product meant it could be recycled where they live. In the early to mid-1990s, a  
 18 coalition that included plastics recyclers urged SPI to change the chasing arrows symbol to avoid  
 19 consumer confusion and make it easier for plastic recyclers to process incoming materials. SPI  
 20 refused to accept the suggestions of the coalition, choosing instead to continue using the chasing  
 21 arrows symbol that wrongly convinced consumers that plastics separated for recycling would  
 22 actually be recycled. This consumer confusion, which placed the blame of plastic waste on  
 23 consumers themselves and thus paralyzed regulatory solutions, was the point.

24 **3. ExxonMobil and the plastics industry successfully fought against**  
 25 **plastics restrictions in California and elsewhere with the promise that**  
 26 **recycling would make plastics more sustainable.**

27 174. Mobil aggressively responded to regulatory and legislative solutions to reduce  
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<sup>90</sup> Sullivan, *Plastic Wars* (film transcript) (2020) PBS Frontline  
 <<https://www.pbs.org/wgbh/frontline/documentary/plastic-wars/transcript/>> (as of July 29, 2024).

1 the use of disposable plastic products in order to continue growing its plastics production  
2 business. Beginning in the early 1970s, SPI aggressively fought a tax on plastic bottles in New  
3 York and won.

4 175. SPI then created a separately-funded Public Affairs Council, the function of  
5 which was limited in scope to areas of packaging and solid waste. The Public Affairs Council  
6 monitored and reported to its members on state bills related to packaging, solid waste, littering,  
7 and other areas of environmental concern.

8 176. Mobil and the plastics industry mobilized against anti-plastic initiatives “in  
9 every state and municipality that offered a serious threat to the industry’s sales and profits.”  
10 Mobil also mobilized its efforts at the federal level. In 1974, SPI boasted that it persuaded the  
11 U.S. Food and Drug Administration to bypass a statement on the environmental impact of  
12 refillable or disposable plastic bottles, and instead only compared plastic disposables to other  
13 disposable materials. The plastics industry aimed to quash challenges to the growth of plastic use  
14 and the profits derived from plastics at every level.

15 177. As part of its strategy to continue promoting the false promise of recycling, the  
16 Council also successfully fought plastics restrictions and bans in California. On April 26, 1989,  
17 the California State Lands Commission banned the use of polystyrene foam food containers at  
18 state-led concession stands and marinas. The Council for Solid Waste Solutions “coordinat[ed] a  
19 meeting between industry representatives and the commission to attempt to reverse the  
20 prohibition.” Indeed, a June 26, 1988 *San Francisco Examiner* article titled, “*War of words over*  
21 *foam packaging*,” noted that “Mobil [] spen[t] tens of thousands of dollars in an elaborate public  
22 relations campaign to slow the spread of laws that make it illegal to use foam containers.”

23 178. In April and May of 1989, several California cities considered bans on  
24 polystyrene packaging. On April 24, 1989, the City of Palo Alto considered ordinances that  
25 would (1) ban disposable polystyrene and rigid plastic food service items, (2) require retail stores  
26 to offer either paper bags only or a choice between paper and plastic bags, and (3) require that  
27 city staff purchase alternatives to polystyrene and disposable rigid plastic food service items. In  
28 May 1989, the City of San Ramon considered an ordinance to ban the use of polystyrene foam

1 food packaging by restaurants and its city administrative offices. The Council for Solid Waste  
2 Solutions opposed these ordinances.

3 179. In May 1989, the County of Santa Cruz considered banning the use of  
4 polystyrene foam food packaging. According to the Council, “[i]ndustry representatives have  
5 presented the assistant county counsel with information on consequences of such a ban.” The  
6 Council successfully opposed passage of the ban. The County of Santa Cruz would go without a  
7 polystyrene ban for almost two decades—until 2008, when it passed an ordinance banning  
8 polystyrene foam packaging in food service.

9 180. According to the Council for Solid Waste Solutions, “[t]he Sacramento County  
10 Board of Supervisors on April 18 [1989] adopted a policy encouraging the public and private use  
11 of ‘recyclable, reusable, or biodegradable’ products made without [chlorofluorocarbons]. In  
12 response to testimony and meetings with [the Council for Solid Waste Solutions] and industry  
13 representatives, the board amended their original proposal that would have called for a decrease  
14 in the use of polystyrene foam products and increased use of biodegradable products.” Similarly,  
15 “[t]he City of Huntington Beach had directed its citizens’ advisory committee to investigate the  
16 feasibility of a ban on polystyrene cups made with [chlorofluorocarbons]. Following a meeting  
17 with [the Council for Solid Waste Solutions] on May 11, the committee decided to recommend  
18 against the ban.”

19 181. In May 1989, Los Angeles City Councilmember Ruth Galanter introduced a  
20 polystyrene foam packaging ban. The Council for Solid Waste Solutions made plans to address  
21 the councilmember about the proposal. The City of Los Angeles would go without a polystyrene  
22 ban for over three decades; it finally passed an ordinance banning polystyrene foam products in  
23 2022.

24 **4. Mobil deceptively advertised the expansion of recycling initiatives**  
25 **but quietly abandoned them a few years later.**

26 182. As described below, Mobil claimed that its plans to recycle plastic bags, its  
27 participation in the National Polystyrene Recycling Company, along with its work through the  
28 Council for Solid Waste Solutions, showed that the plastics industry was responsibly recycling.

1 Through these and other efforts, Mobil conveyed that plastic recycling would solve the problem  
 2 of plastic waste and pollution. These efforts, however, paled in comparison to the huge numbers  
 3 of virgin plastics the industry was producing. Moreover, Mobil could not sustain these recycling  
 4 projects for more than a few years. As Exxon Chemical Vice President Irwin Levowitz explained  
 5 in a 1994 meeting with the American Plastics Council (APC), “[w]e are committed to the  
 6 activities, but not committed to the results.”<sup>91</sup>

7 **a. Mobil’s highly publicized efforts to recycle polystyrene failed.**

8 183. In November 1988, Mobil announced that along with plastic manufacturer  
 9 Genpak Corporation, it would open the nation’s first polystyrene recycling plant in Leominster,  
 10 Massachusetts, which would start by recycling used foam dishes from school, industrial, and  
 11 institutional cafeterias. The plans were for the Leominster plant to recycle three million pounds of  
 12 used polystyrene per year.

13 184. In or around June 1989, Mobil and six other producers of polystyrene  
 14 announced that they were joining forces to form the “National Polystyrene Recycling Company”  
 15 (National Polystyrene) which would establish recycling centers for expanded polystyrene (plastic  
 16 foam), with five such centers opening by the end of 1990. Each of the seven major producers paid  
 17 two million dollars to start the company. National Polystyrene planned to open recycling centers  
 18 near Los Angeles, San Francisco, Chicago, and Philadelphia, in addition to existing facilities in  
 19 Corona, California and Leominster, Massachusetts. Although the involved companies invested  
 20 \$85 million between 1989 and 1997 for recycling facility operations, the National Polystyrene  
 21 project inevitably failed because the recycled products could not profitably compete with virgin  
 22 resin.

23 185. National Polystyrene promised that “1990 is going to be a pivotal year for  
 24 polystyrene recycling’ [ . . . ]. It will be the year that polystyrene recycling gains momentum.” In  
 25 1990, Mobil published advertisements in national newspapers telling consumers that the National  
 26 Polystyrene Recycling Company’s goal was to recycle at least 25 percent of all food service and

27 \_\_\_\_\_  
 28 <sup>91</sup> Allen et al., Center for Climate Integrity, The Fraud of Plastic Recycling, *supra*, at page 21.

1 packaging polystyrene by 1995, or 250 million pounds per year. In or around August 1990,  
2 National Polystyrene announced the opening of a second recycling facility, this time in Corona,  
3 California, to be operated by TALCO Recycling Inc. beginning in October 1990.

4 186. According to National Polystyrene, products made out of the used polystyrene  
5 would be turned into items with long service lives, keeping the polystyrene out of the waste  
6 stream long-term. National Polystyrene also falsely claimed that “most products made from  
7 recycled polystyrene can be recycled again and again.”

8 187. Meanwhile, on May 4, 1989, Mobil announced that it would expand a new  
9 polystyrene production line at its plant in Joliet, Illinois, expected to be completed in 1991. The  
10 expansion would increase the Joliet plant’s polystyrene production by 485 million pounds of resin  
11 annually and raise Mobil’s total production of polystyrene to 625 million pounds per year.

12 188. But in November 1990, these plans were foiled when a very large consumer of  
13 polystyrene, McDonald’s, announced that it was switching from polystyrene to paper packaging  
14 for its restaurants because its attempts to have its customers separate polystyrene had been largely  
15 unsuccessful. This meant that the materials arriving at the recycling plant were contaminated and  
16 produced low-quality recycled plastic.

17 189. In the wake of McDonald’s ending its use of polystyrene, National Polystyrene  
18 announced that it would instead focus on partnerships with schools and industrial cafeterias, as  
19 “students are more dutiful in separating foam trays from other wastes.” In East Rockaway, New  
20 York and Lexington, Massachusetts, National Polystyrene led students who wished to stop using  
21 polystyrene trays in their lunchrooms to believe that allowing the plastics industry to assist them  
22 in recycling the trays was more beneficial than switching to a different material. Los Angeles  
23 Unified School District, as well as other school districts in California, contracted to provide their  
24 used polystyrene trays to National Polystyrene and other polystyrene recyclers.

25 190. By 1994, just five years after the program started, National Polystyrene had cut  
26 its staffing by 25 percent and closed its Hayward, California plant, as it was forced to cut costs in  
27 an attempt to compete with virgin resin. National Polystyrene had sold its first plant in  
28 Leominster, Massachusetts and that plant had subsequently closed as well. In 1997, National

1 Polystyrene also closed its plant in Bridgeport, New Jersey, leaving only its plants in Chicago,  
 2 Illinois and Corona, California. National Polystyrene admitted that the company was still not  
 3 profitable and had only made money in 1995 and part of 1996. The President of National  
 4 Polystyrene blamed consumers for recycling's inherent limitations, claiming "[t]he public does  
 5 not want to buy recycled products."

6 191. In 1997, a 14-year-old student in North Carolina investigated her school's  
 7 polystyrene tray recycling program for a class project and discovered that the trays were being  
 8 dumped into a landfill rather than recycled. The National Polystyrene chairman confirmed that  
 9 only two percent of polystyrene was being recycled at the time, despite the industry's promise to  
 10 recycle 25 percent by 1995, and again blamed consumers for "not participating as expected." In  
 11 1999, National Polystyrene was sold.

12 **b. Exxon quickly abandoned its polypropylene recycling center.**

13 192. Exxon engaged in similar short-term projects in an attempt to convince the  
 14 public that plastic recycling would solve the problem of plastic waste and pollution. In 1991,  
 15 Exxon Chemical Company began construction of a plastics recycling facility in Summerville,  
 16 South Carolina, with stated plans to recover 20 million pounds per year of post-industrial scrap.  
 17 In 1994, Exxon sold its South Carolina polypropylene recycling center.<sup>92</sup> Exxon explained that it  
 18 had built the recycling center to demonstrate a method for recycling polypropylene resin but had  
 19 sought a buyer "that would continue to operate this facility and integrate it as part of its core  
 20 business."

21 193. This recycling "demonstration" bought Exxon cover to continue investing in  
 22 ramping up plastic production. Indeed, less than a year later after it sold its recycling facility,  
 23 Exxon Chemical announced that it would build a new polypropylene production line at its  
 24 Baytown, Texas plant. The new line would raise production by 240,000 tonnes per year to bring  
 25 Baytown's yearly capacity to 720,000 tonnes. Exxon also announced that it would produce a new

26 \_\_\_\_\_  
 27 <sup>92</sup> Exxon sold the recycling center to Washington Penn Plastics, which in 2001 formed a  
 28 joint venture with another local polypropylene recycling plant in an attempt to make operations  
 profitable, as both recycling center owners had found their recycling endeavors unprofitable.  
 (That facility closed in 2008.)

1 low density polyethylene (called “EXCEED”).

2 **c. Mobil misrepresents its ability to recycle polyethylene shopping**  
3 **bags.**

4 194. In 1990, Mobil announced that it would begin a program to recycle  
5 polyethylene grocery sacks at its factories in Jacksonville, Illinois; Covington, Georgia; Macedon,  
6 New York; and Temple, Texas. Mobil announced it would work with any willing supermarkets to  
7 collect plastic bags. Kroger and A&P would participate, as well as Safeway in California, Hawaii,  
8 and Nevada. Mobil assured consumers that it was “good for the environment” that so many of  
9 them used plastic bags to carry their groceries because the bags would be “recycled into new,  
10 useful plastic products.” Customers could bring in shopping bags to recycle, as well as other types  
11 of plastic bags.

12 195. In 1992, Mobil announced that it would be able to wash polyethylene at its  
13 Jacksonville, Illinois plant prior to recycling, streamlining the recycling process. The following  
14 year, Mobil announced that the film it recycled at its Jacksonville, Illinois facility would be used  
15 in its new stretch film, Marketwrap, containing at least 20 percent post-consumer material, as well  
16 as its Tucker Housewares line, consumer and industrial waste bags, and wood-polymer composite  
17 building material.

18 196. Customers and grocery stores concerned about the environmental impact of  
19 plastic shopping bags eagerly took to the new program. Customers of the Lucky grocery store  
20 chain in Southern California returned 9.7 million plastic bags during approximately the first year  
21 and a half that Lucky started accepting them.

22 197. As the popularity of the bag return program grew, it became clear that the bags  
23 were not being converted into new products as customers were promised. In 1992, Bob  
24 Leaversuch, an editor of *Modern Plastics*, explained that the bag return stream, predictably, is a  
25 mix of linear-low-density PE and high molecular weight-HDPE, materials having markedly  
26 different densities, and flow and physical properties. And the mix of colors and inks used in  
27 grocery sacks also yields a reclaimed pellet that is gray-green, and whose reuse potential is  
28 therefore limited. Nor can one ignore the potential contaminants, ranging from paper receipts to

1 pennies left in the bags.

2 198. As one processor-converter told Mr. Leaversuch, “Our industry is being driven  
3 to put recycle-content in our bags, but make no mistake about it, this is difficult and it drives up  
4 our cost.” It cost 25 cents per pound to process the used bag stream, while equivalent virgin resin  
5 can be purchased for 22 cents per pound.

6 199. Seeing the writing on the wall, in 1995, Mobil sold its entire Plastics Division,  
7 which included its facilities for recycling polyethylene grocery sacks in Jacksonville, Covington,  
8 Macedon, and Temple.

9 **d. By the mid-1990s, Exxon, Mobil and the plastics industry**  
10 **stopped funding recycling efforts and ramped up production of**  
11 **virgin plastics.**

12 200. By the mid-1990s, the plastics industry had succeeded in convincing the public  
13 that it could sustainably use and dispose of plastic products marketed by Mobil and others  
14 because the plastics would be recycled. The industry’s focus on selling the recyclability of  
15 plastics, and thus investments in recycling itself, waned. The American Plastics Council’s (APC)  
16 senior director of government affairs and state legislation explained: “There’s a shift in the  
17 political climate .... There’s a recognition that the plastics industry has made strides. There is a  
18 feeling we are more in alignment, that we’re not singled out as the symbol of a throwaway  
19 society, a society using too much.” As one industry consultant observed: “The environmental  
20 pressure is off.”

21 201. Meanwhile, the plastics industry had accurately recognized that recycling was  
22 not economically viable. The price of recycled resins could not compete with low-cost virgin  
23 resins, and recycled resins were of lower quality. Higher-priced products made of lower-quality  
24 recycled resins had difficulty competing with cheaper virgin plastic products, despite customers’  
25 desires for recycled products.

26 202. In the late 1990s, Exxon was producing 1.6 billion pounds of virgin  
27 polypropylene at its Baytown, Texas chemical plant. Exxon also produced polyethylene and  
28 worked to develop new uses that would necessitate its additional production, such as single-  
serving milk bottles that consumers could drink on the go. A business research firm conducting a

1 1995 study of plastic recycling concluded that:

2 Recycled resin prices must decrease in order to make them more competitive with  
3 virgin resins. Some of the price differentials will be enhanced when economies of  
4 scale are reached. Nevertheless, recycled resins are more difficult to process and of  
5 generally lower quality than virgin resins because of the presence of contaminants  
and an array of varying color and other additives.... Enhanced supercleaning and  
other processes produce high quality resins comparable to virgin materials but at a  
higher cost.

6 The firm predicted that a mere 3.4 percent of plastics would be recycled by 1998, a far cry from  
7 the 25 percent the industry had promised by 1995.

8 203. In 1996, Rutgers' Center for Plastics Recycling Research, which opened in  
9 response to New Jersey's attempts to ban non-recyclable materials, closed due to "dwindling  
10 contributions from the plastics industry, a perceived decline in the necessity and practicality of  
11 plastics recycling, and a change in research emphasis by the university and state agencies." Two  
12 major recycling centers also closed at or around the same time: Quantum Chemical's plant in  
13 Heath, Ohio, and Union Carbide Corporation's plant in Piscataway, New Jersey. After plastics  
14 industry lobbyists succeeded in preventing the California legislature from passing a robust  
15 plastics recycling law, and after the plastics industry successfully convinced the public that  
16 voluntary recycling was the solution to plastic waste and pollution, the industry shifted its focus  
17 away from recycling.

18 204. When the industry urged the public to embrace plastics recycling and to "take  
19 responsibility" for consumers' own use of plastic products, the public willingly did so. But the  
20 recycling industry never committed to actually recycle these plastic products.

21 205. In communities near San Diego, local governments that had eagerly set up  
22 curbside recycling programs found that no one wanted most of the plastics they collected from  
23 residents, except for soda bottles, jugs, and similar items. For recyclers, it was not economically  
24 feasible to take other plastics, and those communities considered dumping the purportedly  
25 recyclable trash they had collected.

26 206. In the Twin Cities in Minnesota—two of the first cities to consider plastic bans,  
27 which instead accepted the plastics industry's offer of assistance in developing a recycling  
28 program—ostensibly recyclable plastic products were "piling up" due to a lack of recycler

1 demand.

2 207. For the recycling industry, it was impossible to make plastics recycling  
3 profitable. Anticipating that plastic recycling would be mandated, an owner of a Norwalk,  
4 Connecticut solid waste consulting company stated, “It’s hard to make money on it, but we’ve got  
5 to find ways to minimize the losses.” Indeed, an employee of Replatec, a plastic waste company,  
6 also stated that “it’s not clear that the market for even ‘pure’ recycled resins will be strong enough  
7 to support the cost of sorting and collecting any time soon—even if the industry realizes its goals  
8 of developing new uses for recycled material.” Likewise, governmental entities were also facing  
9 budget crises that affected plastics recycling: “Washington, D.C. halted municipal recycling  
10 several times in the mid-1990s, as did New York City for two years starting in 2001. In both  
11 cases, local officials argued that they had to suspend recycling to save money.”<sup>93</sup>

12 208. As the Council for Solid Waste Solutions’ Ronald Lisemer said, “[t]he industry  
13 attitude was, ‘We’ll set this up and get it going, but if the public wants it, they are going to have  
14 to pay for it.’”<sup>94</sup>

15 209. At an APC meeting in 1994, Exxon staff advised others to avoid being too open  
16 about discussing how far from target the industry was from meeting its recycling goals, as the  
17 issue was “HIGHLY SENSITIVE POLITICALLY.”<sup>95</sup>

18 210. APC ultimately failed to meet the goals set by its parent organization, SPI, to  
19 recycle 25 percent of plastics by 1995. APC denied that it had failed, stating vaguely that “[t]he  
20 idea of rates, dates, mandates . . . numerical goals, is all very artificial.” APC retreated from SPI’s  
21 goal, claiming, “the 25 percent target is not as important as it once was” because progress had  
22 been made to remove obstacles to recycling. The former director of governmental affairs for Dow  
23 Chemical Co., who was also involved with APC, explained that “[SPI was] caught in a rate and  
24 date frenzy. . . . There was pressure to set rates and dates because the fear was that if they didn’t,  
25 the government would set worse ones.”

26 <sup>93</sup> Rogers, *Gone Tomorrow: The Hidden Life of Garbage*, *supra*, at page 180.

27 <sup>94</sup> Sullivan, *Plastic Wars* (film transcript), *supra*.

28 <sup>95</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at page 14 (citing Bailey Condrey, *ART Meeting—Houston 1/26/94*, in Notes 1 (1994)).

211. ExxonMobil’s campaign of deception—or, “propaganda efforts,” as one 1988 article coined it—had succeeded. With the public continually falling victim to ExxonMobil’s misinformation, the demand for plastic has steadily increased for decades. Consequently, “U.S. plastics production grew from 3 billion pounds in 1958 to more than 61 billion pounds in 1990, with an average annual growth rate of 10.3 percent.”

212. The result foreseeably oversaturated and overwhelmed an ill-equipped waste management system. Over ten years later, in 2000, the plastics recycling rate sat at only six percent and only increased three percentage points, to nine percent, by 2018.<sup>96</sup> According to plastic waste export data, the ostensible increase to nine percent was largely due to millions of pounds of plastic waste being exported each year to China and developing countries, supposedly for recycling but often for incineration or landfilling.<sup>97</sup> Today, the plastic waste exports have declined and the U.S. plastics recycling rate has declined to a dismal five percent.<sup>98</sup>

**D. In the 2000s, ExxonMobil Again Promoted Recycling to Distract the Public from Its Contribution to Plastic Pollution.**

**1. In the 2000s, public knowledge of marine plastic pollution becomes widespread.**

213. By the late 1990s and early 2000s, public attention temporarily shifted away from the issues of plastic production and waste management, as ExxonMobil had successfully convinced many members of the public that their plastic waste would be recycled.

214. But the full extent of plastic pollution would not stay hidden for long. In 1997, a sailor and researcher named Charles Moore stumbled upon what later became known as the Great Pacific Garbage Patch—an enormous area between California and Hawaii where pollution had converged and formed a giant plastic soup. The plastic ranged in size from tiny particles to much larger items like bottles and traffic cones.

<sup>96</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes, and Recycling*, *supra*.

<sup>97</sup> Beyond Plastics and The Last Beach Cleanup, The Real Truth about the U.S. Plastics Recycling Rate, *supra*, at page 2.

<sup>98</sup> Nat. Renewable Energy Laboratory, *NREL Calculates Lost Value of Landfilled Plastic in the U.S.* (April 28, 2022) <<https://www.nrel.gov/news/press/2022/nrel-calculates-lost-value-of-landfilled-plastic-in-us.html>> (as of July 28, 2024); see also Beyond Plastics and The Last Beach Cleanup, *supra*.

215. Moore's discovery inspired him to dedicate his career to studying marine pollution. Other researchers followed suit and the issue received attention from mainstream media. By the mid-2000s, the Garbage Patch had received broad media coverage and scientists had found a total of five similar gyres where trash was concentrated.

216. Scientists studying the impacts of plastic pollution determined that nearly 90 percent of the floating mass of trash was plastic. Scientists also observed that albatross chicks born near the floating trash consumed plastic items that they mistook for the sea life they normally consume and that many of the chicks passed away. Plastic also caused the death of an estimated one million other seabirds and a hundred thousand other sea mammals and turtles every year.

217. Similar to the late 1980s and early 1990s, when ExxonMobil faced public backlash over the volume of plastic waste that its business had created, ExxonMobil had a new public relations crisis. By the mid-2000s, not only was the public aware that plastics produced an enormous amount of waste, but the public now knew that vast amounts of plastic were flowing into the ocean and causing untold damage to the marine environment and wildlife.

218. Patty Long, interim chief executive of the Plastics Industry Association, reflected at an industry event in 2019 that "it's been pretty uncomfortable ... as we have watched images of plastic strewn over beaches and pictures of sea animals with ingested plastic."<sup>99</sup>

219. In 2008, the California Ocean Protection Council, a state agency, issued a strategy to reduce marine litter, implementing its 2007 resolution addressing the same concerns.<sup>100</sup> The strategy included reducing single-use plastic packaging, preventing and controlling litter, removing litter, and coordination with other Pacific jurisdictions.<sup>101</sup>

220. In 2004, an oceanographer named Richard Thompson published a scientific article documenting tiny pieces of plastic that he and his colleagues had discovered and collected

<sup>99</sup> Bruggers, *Booming Plastics Industry Faces Backlash as Data about Environmental Harm Grows*, Inside Climate News (Jan. 24, 2020) <<https://insideclimatenews.org/news/24012020/plastics-marine-oceans-climate-change-oil-gas-carbon-emissions/>> (as of July 29, 2024).

<sup>100</sup> Cal. Ocean Protection Council, *An Implementation Strategy for the California Ocean Protection Council Resolution to Reduce and Prevent Ocean Litter* (Nov. 20, 2008) page 6.

<sup>101</sup> *Ibid.*

1 in the beaches near Plymouth, United Kingdom. Thompson’s study stated that the plastic  
2 particles—which he called “microplastics”—appeared to be disintegrated fragments of larger  
3 pieces of plastic. The number of microplastics from the 1980s and 1990s were much higher than  
4 the numbers from the 1960s and 1970s, suggesting a link between plastic production and creation  
5 of microplastics. The environmental consequences of the microplastics were unknown, but  
6 deemed to warrant further study.

7 221. Suddenly, the public realized that plastics were actually everywhere and posed a  
8 formidable danger.

9 **2. ExxonMobil reuses its old strategy of emphasizing recycling to divert**  
10 **attention from plastic production.**

11 222. ExxonMobil, through its agents, servants and alter-ego industry groups,  
12 disputed that plastic production was to blame for marine pollution. ExxonMobil worked to shift  
13 any focus from itself as a resin producer to the consumers of plastic products. ExxonMobil  
14 claimed that individuals are responsible for pollution through their behavior. Additionally, the  
15 American Chemistry Council (ACC) told the press that “[t]he responsibility is with the people  
16 who control the material, not those who produce it.” ACC further asserted that everyone shares a  
17 responsibility to stop litter in order to prevent plastics from polluting the ocean.

18 223. As in previous decades, ExxonMobil perpetuated the false message that plastics  
19 recycling would solve the problem of plastic waste and pollution, in order to distract the public  
20 from concern over the environmental harm that plastics cause and to allow ExxonMobil to  
21 produce new plastic at accelerating rates. In 2009, the ACC told CNN that most plastics are  
22 recyclable and the next year said “Plastics don’t belong in the ocean—they belong in the  
23 recycling bin. Plastics are a valuable resource—too valuable to waste as litter and as trash.”  
24 ExxonMobil knew that these statements were false or likely to deceive the public, including  
25 knowledge that most plastics could not be recycled at scale, that plastics would end up in the  
26 ocean, and that there was no economic market for recycled plastic.

27 224. ExxonMobil, through the ACC, created new recycling initiatives to deceive the  
28 public into believing that recycling could solve the marine pollution crisis. The ACC advertised

1 that it was working to expand recycling efforts, including recycling of plastic grocery bags,  
 2 educating children on marine debris, and campaigning to fight litter.

3 225. ACC organized an Earth Day program with students at 91 Los Angeles  
 4 afterschool programs to teach students about recycling. The same campaign ran a competition for  
 5 children's soccer teams in Southern California, challenging teams to collect the most recyclable  
 6 material in order to educate them on the importance of recycling and reducing litter. The ACC  
 7 explained that the children should be proud of their efforts because "the plastics they recycled  
 8 will go on to have second and third lives as useful new products."

9 226. In 2009, ACC and Keep America Beautiful partnered with California State  
 10 Parks (Parks) to promote recycling by providing recycling bins and signs at beaches throughout  
 11 the state. The same program also worked with the City of Los Angeles and the City of Woodland,  
 12 California to provide similar signs and recycling bins within those cities. ACC participated in the  
 13 California Coastal Cleanup Day, including donating 100,000 plastic bags for collecting waste.  
 14 ACC also sponsored a cleanup and recycling education program in San Diego with Parks.  
 15 However, ExxonMobil and its trade groups simultaneously aggressively pushed the false promise  
 16 of plastic recycling while continuing to saturate the public with ever-increasing amounts of  
 17 single-use plastic.

18 **3. ExxonMobil blames Asian countries for ocean plastics, even though**  
 19 **the same countries historically imported U.S. plastic waste.**

20 227. Prior to 2017, developed countries like the United States shipped most of their  
 21 plastic waste to China. But in 2018, China put in place its National Sword Policy, which banned  
 22 certain types of waste and lowered the acceptable rate of contamination of imports of recyclable  
 23 waste from five percent to 0.5 percent.

24 228. Most exporters of plastic waste were unable to meet China's new standards,  
 25 and, as a result, many of these plastics were landfilled or stored at recycling facilities. No markets  
 26 existed for plastic waste labeled with resin numbers 3 through 7. Some plastic waste was diverted  
 27 to secondary markets in different East and South Asian countries. Other countries, like Malaysia,  
 28 Thailand, and Vietnam, started introducing their own restrictions on the imports of plastic and

1 other waste after becoming inundated with the materials.

2 229. In some areas of the United States, municipal recycling services were forced to  
3 a halt, finding that the lack of a market for recyclables meant that collection costs could no longer  
4 be covered by selling the waste. The City of San Diego was charged over a million dollars by its  
5 waste contractor in 2018. Other California municipalities were required to reduce the materials  
6 collected. Sacramento, for example, ceased collection of plastics with resin numbers 4 through 7  
7 and told residents to throw those items in the garbage.

8 230. In 2020, the ACC lobbied the United States to negotiate with Kenya to accept  
9 imports of U.S. plastics and plastic garbage, in light of U.S. efforts to restrict use of plastic  
10 products at home, and other countries' new unwillingness to accept U.S. plastic garbage.

11 231. The ACC, however, publicly claimed that marine plastic pollution was due to  
12 Asian countries like China, Vietnam, Indonesia, and the Philippines failing to manage their own  
13 waste.

14 232. In or around 2019, ExxonMobil was a founding member of the Alliance to End  
15 Plastic Waste (Alliance), an organization formed to promote recycling, waste collection, and  
16 cleaning areas impacted by plastic waste. Importantly, the Alliance does not promote projects that  
17 limit the production of plastic and does not focus on projects for reuse of plastic. Through the  
18 Alliance, ExxonMobil falsely emphasized and continues to emphasize recycling and waste  
19 management as solutions to the plastic waste crisis, despite their inability to solve the crisis.  
20 ExxonMobil pushed the Alliance to ensure that its mission would not include reducing the  
21 production of plastic.

22 233. Consistent with ExxonMobil's deceptive position that plastic pollution in the  
23 ocean is the fault of developing countries with poor waste management infrastructure, rather than  
24 the inevitable result of unbridled plastic production, many of the Alliance's initiatives focused on  
25 developing countries.

26 234. ExxonMobil's investments and actions through the Alliance, however, merely  
27 create the outward appearance of taking action to address ocean pollution rather than actually  
28 providing any relief. As of 2022, the Alliance had only diverted 34,000 tons of plastic waste from

entering the environment, including plastic that was ultimately landfilled or incinerated. This represents a tiny fraction of the Alliance's goal to divert 15 million tons over its first five years,<sup>102</sup> and a negligible portion of the plastic produced by ExxonMobil that enters the ocean annually.

#### 4. ExxonMobil increased its production of virgin plastics in the 2010s.

235. In the 2010s, ExxonMobil made significant investments into ramping up plastic production in the United States. The glut of ethane produced by increased fracking of natural gas, along with growing awareness of climate change and reduced demand for oil and gas as fuel, made plastics an attractive growth area for petrochemicals. In 2018, the International Energy Agency (IEA) reported that petrochemicals, including plastics, consumed 12 percent of oil globally, but that petrochemicals would account for one third and one half of oil consumption by 2030 and 2050, respectively.

236. In 2017, ExxonMobil started producing polyethylene at its plastics plant in Mont Belvieu, Texas. As of 2022, the plant was producing approximately five billion pounds of low-density and high-density polyethylene products each year.

237. In 2019, ExxonMobil also began producing polyethylene at its plastics plant in Beaumont, Texas. In the late 2010s, Exxon additionally expanded its production of plastics in its Baytown, Texas facility.

238. Operation of another plastics facility in San Patricio County, Texas, owned jointly by ExxonMobil and SABIC, a Saudi Arabian diversified chemicals company, began in 2022, increasing ExxonMobil's global polyethylene capacity by 1.3 million tonnes per year.

239. For decades, the deceptive promise of plastics recycling provided ExxonMobil cover in times of public scrutiny of plastic products and allowed it to continue to produce more and more plastic each year unchecked. This deception continues today.

### III. IN A MODERN TWIST, EXXONMOBIL NOW DECEPTIVELY PROMOTES "ADVANCED RECYCLING" AS THE SOLUTION TO THE PLASTIC WASTE AND POLLUTION CRISIS.

240. In recent years, images depicting the dire harms and costs of the overproduction

<sup>102</sup> Baker et al., *Inside Big Plastic's Faltering \$1.5 Billion Global Cleanup Effort*, Bloomberg (Dec. 20, 2022) <<https://www.bloomberg.com/features/2022-exxon-mobil-plastic-waste-cleanup-greenwashing/>> (as of July 29, 2024).

1 of plastic such as beached whales and dead seabirds with their guts bursting with plastic waste  
2 have flooded the internet and our collective consciousness. Further, an explosion of scientific  
3 research has confirmed that plastic particles have infiltrated our bodies and even the most remote  
4 places on Earth.<sup>103</sup> Justifiably, there has been renewed public outcry over the overproduction of  
5 plastic and proliferation of unnecessary single-use plastics.

6 241. ExxonMobil knows that addressing plastic waste and pollution remains a high  
7 priority for the public. ExxonMobil comprehensively tracks scientific research, articles, and  
8 legislation on plastic waste and pollution, and regularly assesses public opinion about the crisis.  
9 Indeed, internally, ExxonMobil notes that “[o]cean plastic waste [is] a top public concern.” In  
10 response to the Minderoo Foundation’s Plastic Waste Makers Index 2021 report that found that  
11 ExxonMobil is the biggest contributor of single-use plastic waste, internally, ExxonMobil feared  
12 that “[t]he focus may be shifting from the brands/retailers to the producers.”

13 242. ExxonMobil is paying close attention to public opinion because it can hurt  
14 ExxonMobil’s bottom line. ExxonMobil views public concerns about plastic waste, specifically,  
15 about single-use plastic waste, as a “market threat.” ExxonMobil considers the production of  
16 polyethylene and polypropylene used in single-use plastic applications as the “core” of its  
17 chemicals and products portfolio, with “80% of EMCC’s growth [being] dependent on single-use  
18 plastics applications.” Further, the predicted global decline in fossil fuel demand is driving  
19 ExxonMobil to urgently move forward with promoting “advanced recycling” to offset sagging  
20 fuel sales with profits from plastic sales. Thus, ExxonMobil has a strong financial motive to  
21 assuage public concern about plastic waste.

22 243. ExxonMobil has knowingly disregarded the growing number of studies  
23 concluding that a dramatic reduction in plastic production is necessary to address the plastic  
24 waste and pollution crisis. Instead, ExxonMobil has turned to its demonstrably false, timeworn  
25 playbook of convincing the public that we can recycle our way out of the plastic waste and  
26 pollution crisis but with a modern twist: ExxonMobil now claims that “advanced recycling” will  
27 address the shortcomings of mechanical recycling.

28 <sup>103</sup> See Factual Background, Section I.A-C, above.

244. “Advanced recycling” (also known as “chemical recycling”)<sup>104</sup> is an umbrella term used by the plastics industry to describe a variety of heat or solvent-based technologies that can theoretically convert certain types of plastic waste into fuels,<sup>105</sup> chemicals, waxes, and petrochemical feedstock, which, after further refinement, can be used to make new plastic. In the United States and globally, pyrolysis is the most common type of proposed “advanced recycling.” Typically, in a pyrolysis operation, plastic waste is heated in a standalone chamber until it yields liquids, waxes, and gases. The liquid is composed of an oil mixture called “pyrolysis oil” or “pyoil” that includes naphtha and other hydrocarbons. Naphtha is then “cracked” in a petrochemical processing unit called a steam cracker, which breaks down the naphtha further into various hydrocarbon products including ethylene, and propylene. Ethylene and propylene are then polymerized to make plastic (polyethylene and polypropylene). However, very little of the plastic waste that undergoes pyrolysis and subsequent processing makes it out as new plastic. A 2023 study by the National Renewable Energy Laboratory concluded that pyrolysis and gasification (a similar technology) only retained 1 to 14 percent of the plastic waste inputted.<sup>106</sup>

245. On December 14, 2022, ExxonMobil announced the start of its “advanced recycling” program after a “successful” trial at its Baytown Complex in Texas. ExxonMobil claims that its Baytown Complex can “recycle” 40,000 tonnes of plastic waste per year. ExxonMobil claims that, through Baytown and other future ventures, it will process 500,000 tonnes of plastic waste per year by year-end 2026.

246. ExxonMobil’s version of “advanced recycling” involves “co-processing” plastic waste. Similar to standalone pyrolysis units, co-processing uses heat to break down plastic waste. But instead of doing so in a standalone chamber, plastic waste is fed into a preexisting oil refinery processing unit called a coker. A miniscule amount of plastic waste is mixed into a large amount of residual refinery materials (materials such as heavy oils and asphalts produced as byproducts

<sup>104</sup> The plastics industry often uses the terms “advanced recycling” and “chemical recycling” interchangeably.

<sup>105</sup> As explained below, any process that creates fuels from plastics is not considered to be “recycling.”

<sup>106</sup> Uekert et al., *Technical, Economic, and Environmental Comparison of Closed-Loop Recycling Technologies for Common Plastics* (2023) 11 American Chemical Society Sustainable Chemistry & Engineering 965, 969.

of the distillation of crude oil in a refinery), and together they undergo the coking (heating) process. The coking process yields mostly pyrolysis oil liquids and a small amount of pyrolysis gas including ethane. Most “advanced recycling” operations that use pyrolysis technologies use naphtha (a component of pyrolysis oil) as a feedstock for steam cracking. However, at its Baytown Complex—the heart of ExxonMobil’s “advanced recycling” program—ExxonMobil operates ethane steam crackers, not naphtha steam crackers. ExxonMobil feeds the small amount of pyrolysis gas ethane produced from the coking process, alongside a much, much larger stream of virgin ethane gas, into the ethane steam cracker to produce ethylene and propylene, some of which is then polymerized to make plastic. The Baytown Complex does not feed naphtha into ethane steam crackers. Naphtha produced in the coking process is instead used to primarily produce fuels.

247. ExxonMobil calls the final product of its “advanced recycling” process “certified circular polymers” and has announced the sale of these plastics to large plastic packaging and product manufacturers, including but not limited to, Amcor, Berry Global, Pactiv Evergreen, Pregis, Printpack, and Sealed Air.<sup>107</sup>

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<sup>107</sup> See, e.g., ExxonMobil Chemical, *News Release: Amcor Increases Use of Advance Recycling Materials Leveraging ExxonMobil’s Exxtend Technology* (Apr. 12, 2022) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/93281/amcor\\_release\\_exxtend\\_en](https://www.exxonmobilchemical.com/en/resources/library/library-detail/93281/amcor_release_exxtend_en)> (as of July 29, 2024); ExxonMobil, *News Release: ExxonMobil Makes First Commercial Sale of Certified Circular Polymers* (Feb. 24, 2022) <[https://corporate.exxonmobil.com/news/news-releases/2022/0224\\_exxonmobil-makes-first-commercial-sale-of-certified-circular-polymers](https://corporate.exxonmobil.com/news/news-releases/2022/0224_exxonmobil-makes-first-commercial-sale-of-certified-circular-polymers)> (as of July 29, 2024); ExxonMobil Chemical, *Press Release: Pactiv Evergreen and ExxonMobil Collaborate to Leverage Advanced Recycling for Foodservice Industry Packaging* (Sept. 27, 2023) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/109338/pactiv\\_evergreen\\_and\\_exxonmobil\\_collaborate\\_to\\_leverage\\_advanced\\_recycling\\_for\\_foodservice\\_industry\\_packaging\\_en/](https://www.exxonmobilchemical.com/en/resources/library/library-detail/109338/pactiv_evergreen_and_exxonmobil_collaborate_to_leverage_advanced_recycling_for_foodservice_industry_packaging_en/)> (as of July 29, 2024); ExxonMobil Chemical, *Press Release: Pregis Introduces Circular Innovation to PE Foam Solutions* (Feb. 21, 2024) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/111456/pregis\\_advanced\\_recycled\\_foam\\_press\\_release\\_february\\_2024/](https://www.exxonmobilchemical.com/en/resources/library/library-detail/111456/pregis_advanced_recycled_foam_press_release_february_2024/)> (as of July 29, 2024); Printpack, *Printpack, ExxonMobil, Pacific Coast Producers Bring Circularity to Fruit Cups* (Aug. 29, 2023) Packaging World <<https://www.packworld.com/supplier-news/news/22871469/printpack-printpack-exxonmobil-pacific-coast-producers-bring-circularity-to-fruit-cups/>> (as of July 29, 2024); ExxonMobil Chemical, *News Release: ExxonMobil, Cyclyx, Sealed Air, and Ahold Delhaize USA Demo Advanced Recycling for Plastic Waste* (Apr. 27, 2023) <[https://www.exxonmobilchemical.com/en/resources/library/library-detail/107131/circularity\\_demo\\_press\\_release\\_en](https://www.exxonmobilchemical.com/en/resources/library/library-detail/107131/circularity_demo_press_release_en)> (as of July 29, 2024).

1           248.       ExxonMobil boldly heralds this “proprietary advanced recycling technology” as  
2 a breakthrough in recycling technology. But this purported breakthrough technology has been  
3 available to ExxonMobil to employ in their production operations for decades. In fact, Mobil  
4 patented the co-processing of plastic waste in cokers in 1978.<sup>108</sup> And both Exxon and Mobil  
5 conducted co-processing pilots in the 1990s, neither of which continued beyond the trial phase as  
6 public attention on plastic waste dwindled at that time.

7           249.       Nevertheless, almost half a century after Mobil originally patented the co-  
8 processing of plastic waste, ExxonMobil attempts to rebrand this technology as the “new” and  
9 “advanced” solution in order to appease renewed public concern over plastic waste and pollution.

10          250.       Internal communications show that ExxonMobil is advocating for public  
11 acceptance of “advanced recycling” “to avoid the ‘negative’ impacts/consequences of the  
12 looming implementation/adoption of the circular economy way of thinking.” ExxonMobil admits  
13 that its driving motivation behind its “advanced recycling” push is that “the public perception  
14 benefits received will be invaluable ... even if it proves to not be financially sustainable.” This  
15 startling admission harkens back to former Exxon Chemical vice president Irwin Levowitz’s 1994  
16 admission that Exxon was “committed to the activities [of recycling plastic], but not committed to  
17 the results.”

18          251.       ExxonMobil’s aggressive promotion and marketing of “advanced recycling”  
19 deceives its customers, investors, and the public at large. This modern-day campaign of deception  
20 regarding “advanced recycling” is apparently working. ExxonMobil internally notes that  
21 “[r]esearch shows that the public is increasingly aware of plastics issues but favorably receptive  
22 to advanced recycling messages.” Like its promotion of mechanical recycling decades ago,  
23 ExxonMobil’s promotion of “advanced recycling” is another deceptive marketing campaign  
24 designed to encourage unabated consumption of its plastic products, rather than a real solution to  
25 the extraordinarily harmful plastic waste and pollution crisis that ExxonMobil’s deception  
26 substantially caused and continues to exacerbate.

27 \_\_\_\_\_  
28 <sup>108</sup> Yan, Mobil Oil Corporation, Conversion of Solid Wastes to Fuel Coke and Gasoline/Light Oil, U.S. Patent 4,118,281 (Oct. 3, 1978).

**A. ExxonMobil Conceals the Technical Limitations of Its “Advanced Recycling” Program.**

252. ExxonMobil promotes its “advanced recycling” program as a technological wonder. However, a closer look reveals that ExxonMobil has misled the public about the technical capabilities of its co-processing technology.

**1. ExxonMobil destroys most of the plastic waste it co-processes.**

253. When a company claims that it “recycles” plastic waste, a reasonable consumer would believe that most of the plastic waste that enters the recycling process would end up as new plastic. In misleading statements in interviews and articles, ExxonMobil repeatedly suggests that most or all of the plastic waste it co-processes in its “advanced recycling” program becomes new plastic. However, as explained below, only a small portion of the plastic waste input actually becomes new plastic. Examples of ExxonMobil’s deceptive talking points include:

- “Advanced recycling . . . break[s] down materials to their molecular level. These ‘refreshed’ molecules then become the raw materials used to make brand-new plastics and other valuable products. It truly gives a new life to plastic waste.”<sup>109</sup>
- “[U]nlike mechanical recycling—where each round of recycling degrades the plastic—there are no evident technical limitations regarding how many times a plastic product can be put through advanced recycling processes.”<sup>110</sup>
- “That molecule will go into our unit where it will be broken down to its molecular level and that molecule will end up becoming new plastic.”<sup>111</sup>
- “Our process is efficient, converting about 90% of the plastic waste into raw

<sup>109</sup> ExxonMobil, *Advanced Recycling: A Different Way to Handle Used Plastics* <<https://corporate.exxonmobil.com/what-we-do/materials-for-modern-living/a-different-way-to-handle-used-plastics>> (as of July 29, 2024).

<sup>110</sup> McKee, President, ExxonMobil Product Solutions, *ExxonMobil Steps Up Advanced Recycling to Help Address Plastic Waste* (Mar. 30, 2021) <<https://corporate.exxonmobil.com/news/viewpoints/steps-up-advanced-recycling-plastic-waste#:~:text=And%20unlike%20mechanical%20recycling%20%E2%80%93%20where%20each%20round,product%20can%20be%20put%20through%20advanced%20recycling%20processes>> (as of July 29, 2024).

<sup>111</sup> KPRC 2, *Efforts of Advanced Recycling* (Feb. 16, 2023, updated July 22, 2024) Click2Houston.com <<https://www.click2houston.com/video/news/2023/02/16/efforts-of-advanced-recycling/>> (as of July 29, 2024).

materials.”<sup>112</sup>

- “It is a facility that is taking difficult to recycle plastics, plastics that would otherwise end up in a landfill or incineration, and we are putting them into this unit producing high quality raw materials that can then be used to make new plastic products.”<sup>113</sup>
- The output is “high performance circular polymer. This is one of the beauties of this process. We can take plastic waste in and convert it into materials with the same quality as you have today.”<sup>114</sup>
- “For every pound of certified circular plastic our customers buy from us, they can be confident that at least one pound of plastic waste was removed from the environment and from the waste stream.”<sup>115</sup>

254. These types of statements misleadingly suggest that ExxonMobil’s “advanced recycling” technology achieves 100 percent yield, i.e. that most or all of the plastic waste inputted in the process becomes new plastic or other environmentally beneficial products.

255. However, 100 percent yield to new plastics, or anywhere close to it, is technically impossible, and ExxonMobil knows this. At its Baytown Complex—currently the site of ExxonMobil’s only active “advanced recycling” unit—a mere **eight percent** of the plastic waste ExxonMobil co-processes in its cokers and ethane steam crackers becomes new plastics. The remaining 92 percent of the plastic waste co-processed becomes primarily fuels, which are ultimately destroyed after they are combusted. Therefore, ExxonMobil’s claims that there are no limitations to endlessly recycling plastic waste are false because 92 percent of the plastic waste is

<sup>112</sup> Zamora, Senior Vice President, ExxonMobil Product Solutions, *ExxonMobil: Bringing Advanced Recycling to Life* (Nov. 14, 2023) Consumer Brands Assn. <<https://consumerbrandsassociation.org/blog/exxonmobil-bringing-advanced-recycling-to-life/>> (as of July 29, 2024).

<sup>113</sup> BIC Magazine, *ExxonMobil Starts Up Large-Scale Advanced Recycling Facility in Baytown, Texas* (Apr. 23, 2023) YouTube <<https://www.youtube.com/watch?v=pslh0tx4oUI>> (as of July 29, 2024).

<sup>114</sup> *Ibid.*

<sup>115</sup> See, e.g., Skewes, *ExxonMobil Advanced Recycling Changes Plastic’s Destiny*, The Baytown Sun (Apr. 16, 2023) <[https://baytownsun.com/local/exxonmobil-advanced-recycling-changes-plastic-s-destiny/article\\_86e61a0e-da32-11ed-a571-cb855cdf8807.html/](https://baytownsun.com/local/exxonmobil-advanced-recycling-changes-plastic-s-destiny/article_86e61a0e-da32-11ed-a571-cb855cdf8807.html/)> (as of July 29, 2024).

1 destroyed (not made into new plastics) in each processing cycle. But the low yield is not due to  
 2 using pyrolysis gas ethane as the feedstock to the crackers. In a potential future “advanced  
 3 recycling” project at another ExxonMobil Gulf Coast plant site that would employ pyrolysis oil  
 4 naphtha as the feedstock to naphtha steam crackers, a mere 13 percent of the plastic waste would  
 5 become new plastics.

6 256. ExxonMobil, of course, omits this critical piece of information in public  
 7 statements. ExxonMobil knows that its “advanced recycling” program would not gain traction  
 8 and public acceptance if it had to admit that most of what it yields is not plastic but rather fuels.  
 9 The truth is ExxonMobil’s “advanced recycling” program is less like a recycling program, and  
 10 more like a waste disposal or destruction program akin to the incineration solutions advocated by  
 11 ExxonMobil in the past.

12 **2. ExxonMobil’s “certified circular polymers” are effectively virgin**  
 13 **polymers due to inherent technical equipment limitations.**

14 257. When plastic is mechanically recycled, the plastic downgrades, and the final  
 15 product is aesthetically unpleasing or unsafe to use for things like food packaging or medical  
 16 applications. ExxonMobil claims that its “advanced recycling” technology solves that dilemma,  
 17 as its “certified circular polymers are identical to polymers produced from virgin raw  
 18 materials.”<sup>116</sup> ExxonMobil has even announced sales to major converters (companies that  
 19 specialize in transforming raw plastic materials into finished products) and brands touting that its  
 20 “certified circular polymers” can and would be used in food-safe applications such as fruit cups  
 21 and food packaging.<sup>117</sup> These “certified circular polymers” would be produced at its Baytown  
 22 facility.

23 258. ExxonMobil is correct that its “certified circular polymers” are, in fact, identical  
 24 to its virgin polymers. But this is not because co-processing magically transforms plastic waste  
 25 into virgin-like plastics. They are identical because, as explained below, ExxonMobil’s “certified

26 <sup>116</sup> ExxonMobil, *News Release: ExxonMobil Makes First Commercial Sale of Certified*  
 27 *Circular Polymers*, *supra*.

28 <sup>117</sup> Printpack, *Printpack*, ExxonMobil, *Pacific Coast Producers Bring Circularity to Fruit*  
*Cups*, *supra*; ExxonMobil, *Press release: Pactiv Evergreen and ExxonMobil Collaborate to*  
*Leverage Advanced Recycling for Foodservice Industry Packaging*, *supra*.

1 circular polymers” actually contain virtually no waste plastic.

2 259. Oil and gas refinery and petrochemical units are not designed to process large  
3 volumes of plastic waste, which contains a wide range of corrosive additives and contaminants. In  
4 order to protect its expensive equipment, ExxonMobil caps the amount of plastic waste it feeds  
5 into its cokers at only one to two percent of the total amount inputted, meaning that *98 to 99*  
6 *percent of the coker’s feed is comprised of virgin refinery residual materials*. Accordingly, any  
7 pyrolysis oil or pyrolysis gas produced will be overwhelmingly derived from virgin materials.  
8 Indeed, an independent study of ExxonMobil’s plastic co-processing operations found that  
9 feeding only one to two percent plastic waste is such an insignificant proportion of the total  
10 flexicoker feed that the plastic waste “should all but disappear in the coking process.”<sup>118</sup> The  
11 study concludes that ExxonMobil could even feed one percent parking lot dirt into its cokers and  
12 not upset the process because of dilution.<sup>119</sup>

13 260. As noted above, the 40,000 tonnes of plastic waste ExxonMobil purportedly co-  
14 processes at Baytown per year yields predominantly pyrolysis oil liquids. It yields a small amount  
15 of pyrolysis gas including ethane. ExxonMobil then mixes this small amount of ethane with a  
16 much, much larger stream of virgin ethane, and together they are fed into an ethane steam cracker  
17 to make ethylene and propylene.

18 261. According to internal documents, the amount of plastic-derived ethane only  
19 constitutes **0.09 percent** of the total ethane stream fed into the ethane steam cracker at Baytown.  
20 This means that any plastic made from the resulting ethylene and propylene could only be  
21 composed of a maximum of **0.09 percent** plastic waste.

22 262. However, in May 2024, ExxonMobil stated that it did not process plastic waste  
23 at the full 40,000 tonnes/year design capacity of the Baytown “advanced recycling” facility, but  
24 rather processed only 22,000 tonnes of plastic waste over 15 months.<sup>120</sup> Based on this actual

25 <sup>118</sup> Nix, Green Group Consulting, Plastic Recycling – Challenges and Opportunities (Feb.  
26 6, 2023) page 15.

<sup>119</sup> *Ibid.*

27 <sup>120</sup> ExxonMobil, *Doubling Down on Advanced Recycling in Baytown* (May 6, 2024)  
28 <<https://corporate.exxonmobil.com/what-we-do/materials-for-modern-living/advanced-recycling-baytown->

(continued...)

operating data, the average amount of plastic made from “advanced recycling,” or plastic waste, would only constitute **0.042 percent** of the total amount of plastic produced at Baytown on an annual basis.

263. With a maximum physical content of just 0.042 to 0.09 percent plastic waste, ExxonMobil’s “advanced recycling” effectively produces a product that is made almost entirely of virgin (new) plastic, but which it nonetheless markets as being a “circular” plastic polymer. In other words, ExxonMobil’s “certified circular polymers” *effectively are* virgin (new) plastics.

### 3. ExxonMobil’s “advanced recycling” technology cannot process large volumes of mixed post-consumer single-use plastic waste.

264. When thinking about the plastic waste and pollution crisis, the public generally is most concerned about post-consumer single-use plastic waste—plastic packaging such as potato chip bags and plastic cups that leak into and visibly pollute the environment. ExxonMobil claims to be able to “recycle” these types of everyday plastic products through its “advanced recycling” program “to help reduce plastic waste in the environment.”<sup>121</sup> According to ExxonMobil, “[a]dvanced recycling also helps remove contaminants, and it can accommodate mixed and soiled plastic waste.”

265. For example, in a blog post, ExxonMobil describes its “advanced recycling” capability as follows: “Imagine your discarded yogurt containers being transformed into medical equipment for your next doctor’s appointment, and then into the dashboard of your next fuel-efficient car.”<sup>122</sup> On a radio interview, ExxonMobil claimed to be able to process “motor oil bottles with oily residue in it, the bubble wrap we get in our latest Amazon packages, pet food bags, chip bags, candy wrappers.” In a video interview, ExxonMobil states: “What we put on the front end here is a really special unit that gets solid plastic waste and all kinds of different

[unit#:~:text=%E2%80%9CThe%20interest%20from%20our%20customers,sustainability%20pledges%2C%E2%80%9D%20Mastroleo%20said> \(as of July 29, 2024\).](#)

<sup>121</sup> ExxonMobil, *News Release: ExxonMobil Tests Advanced Recycling of Plastic Waste at Baytown Facilities* (Feb. 25, 2021) <<https://corporate.exxonmobil.com/news/news-releases/2021/0225-exxonmobil-tests-advanced-recycling-of-plastic-waste-at-baytown-facilities>> (as of July 29, 2024).

<sup>122</sup> McKee, President, ExxonMobil Product Solutions, *ExxonMobil Steps Up Advanced Recycling to Help Address Plastic Waste*, *supra*.

1 varieties into a unit so that we can process it into a raw material that other units can use.”<sup>123</sup>

2 266. ExxonMobil wants the public to believe that its “advanced recycling” program  
3 can process mixed and post-consumer plastics that mechanical recycling cannot.

4 267. However, pyrolysis “advanced recycling,” or “chemical recycling,” technology  
5 cannot process high volumes of mixed post-consumer plastic waste like potato chip bags and  
6 candy wrappers. Indeed, a recent study commissioned by the Association of Plastic Recyclers  
7 confirmed that mixed post-consumer film and flexible packaging (FFP) is not currently suitable  
8 for pyrolysis “advanced recycling.”<sup>124</sup> Despite publicly promoting its “advanced recycling”  
9 program as addressing our everyday residential plastic waste, ExxonMobil knows that such  
10 plastic waste is too contaminated, has too many additives that can harm refinery equipment, and  
11 is too compositionally and chemically variable to safely co-process in cokers and then steam  
12 crackers in large volumes.

13 268. Internally, ExxonMobil flags contaminant management as the “Biggest  
14 Challenge” of co-processing plastic waste. ExxonMobil characterizes the “[i]mpacts [of  
15 contaminants] on unit operability from processing plastics” as a technical risk.

16 269. ExxonMobil’s own chemical engineers internally caution that contaminants  
17 from plastic may pose a performance risk to its equipment.

18 270. Additionally, an internal ExxonMobil document admits that “[n]ot all post-use  
19 plastics are appropriate for chemical recycling” and “[n]ot all post-use plastics are appropriate as  
20 feedstock for all chemical recycling product pathways.” Because of this, ExxonMobil internally  
21 concluded that “[c]ontaminant mgmt. requires tailoring of accessible feed.”

22 271. ExxonMobil’s solution to this problem is to only use clean, clear, and  
23 compositionally uniform plastic primarily from post-commercial and post-industrial sources—  
24 things like clear plastic wraps used by businesses on pallets and bubble wrap.<sup>125</sup> For example, in

25 <sup>123</sup> BIC Magazine, *ExxonMobil Starts Up Large-Scale Advanced Recycling Facility in*  
26 *Baytown, Texas, supra.*

27 <sup>124</sup> Eunomia Research & Consulting, *How to Scale the Recycling of Flexible Film*  
28 *Packaging: Modeling Pyrolysis’ Role in Collection, Quantity and Costs of a Comprehensive*  
*Solution* (Mar. 2024) page 6.

<sup>125</sup> Internal documents show that ExxonMobil is struggling to secure an adequate amount  
(continued...)

one of its agreements for collecting plastic waste to use as feedstock at its Baytown “advanced recycling” facility, ExxonMobil explicitly directs its partner, Cyclyx, to collect “Post-Use Plastic,” which is defined to include pre-consumer material such as clean industrial waste. In addition, in the same agreement, ExxonMobil explicitly specifies that polystyrene—which includes Styrofoam and common items such as red plastic cups and plastic plates—is to be minimized. Polystyrene foam foodware, such as cups and plates, is known to make up a substantial amount of particularly pernicious plastic waste and pollution, leading to several attempts to ban such products in California.<sup>126</sup>

272. Despite understanding the technical limitations of co-processing mixed post-consumer plastic waste, ExxonMobil tailored its public messaging to convince the public that ExxonMobil is addressing post-consumer plastic waste from non-commercial and non-industrial sources. For example, ExxonMobil’s partner, Cyclyx, proposed a press release that explained that “Cyclyx will source post-use mixed waste plastic for [its circularity center] via *existing commercial and industrial sources*.” ExxonMobil’s Vice-President for Sustainability struck the words “existing commercial and industrial sources” and explained to Cyclyx that the “language seems a bit restrictive regarding feed sources (i.e. one ‘existing commercial and industrial’) and could be interpreted as not collaborative with existing municipal waste. I changed the language to something a bit more aspirational and collaborative.” ExxonMobil suggested alternative “aspirational” language, which was ultimately used in the final release. The final release reads: “Cyclyx will source post-use mixed waste plastic for [its circularity center] via a range of existing sources and is continuing to expand its collaboration with companies from across the value chain to develop circular solutions for difficult-to-recycle plastic waste.”

#### **B. ExxonMobil Deceives Its “Certified Circular Polymer” Customers.**

273. As noted above, ExxonMobil’s “advanced recycling” program effectively

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of plastic waste suitable for its co-processing operation so that it has actively sought other types of non-single-use-plastic materials such as used cooking oil, artificial turf, and waste tires to co-process in an effort to keep pace with its publicly-stated “recycling” goals and customer demand.<sup>126</sup> See Factual Background, Section II, above; see also Cal. Coastal Com., *California Coastal Cleanup Day History* <<https://www.coastal.ca.gov/publiced/ccd/history.html>> (as of July 29, 2024).

1 produces virgin polymers, because only a tiny amount of plastic waste is fed to the process and  
 2 only eight percent of that plastic waste is potentially converted to new plastics, resulting in plastic  
 3 end products with a plastic waste content of about 0.042 to 0.09 percent. In other words,  
 4 “advanced recycling,” at best, results in new plastic products that are 99.958 to 99.91 percent  
 5 virgin (new) plastic on an annual basis. Nevertheless, ExxonMobil markets these polymers as  
 6 “certified circular polymers”—brazenly claiming that they were made from plastic waste, even  
 7 though they may contain very little or no recycled plastic at all.

8         274. ExxonMobil closely follows announcements by major converters, brands, and  
 9 retailers about their respective commitments to incorporate more recycled plastic in their product  
 10 offerings. ExxonMobil is aware that these large companies are willing to pay more money for  
 11 recycled plastics. Accordingly, ExxonMobil regularly conducts outreach to these companies to  
 12 persuade them to purchase its “certified circular polymers,” including companies based in or that  
 13 otherwise do business in California. For example, ExxonMobil announced a partnership with  
 14 Printpack, a packaging converter, and Pacific Coast Producers, a California-based agricultural  
 15 company that produces various fruit products, to package certain fruit cups using ExxonMobil’s  
 16 “certified circular polymers.”<sup>127</sup> These fruit cups, which are deceptively promoted as having  
 17 “30% ISCC PLUS certified-circular content” have reached California consumers.<sup>128</sup>

18         275. Over the last few years, ExxonMobil has announced the sale of its “certified  
 19 circular polymers” to other large plastic packaging and product manufacturers, including but not  
 20 limited to, Amcor, Berry Global, Pactiv Evergreen, Pregis, and Sealed Air. These announcements  
 21 give the public the impression that ExxonMobil’s “certified circular polymers” from “advanced  
 22 recycling” have significant environmental benefits, are part of a “circular economy,” and “expand  
 23 the range of plastic materials that society recycles.”<sup>129</sup>

24         276. However, internal documents show that ExxonMobil’s sales of its “certified

25         <sup>127</sup> Printpack, *Printpack, ExxonMobil, and Pacific Coast Producers Bring Circularity to*  
 26         *Fruit Cups, supra*.

26         <sup>128</sup> ISCC PLUS certification is discussed in detail in Section III.D, below.

27         <sup>129</sup> ExxonMobil, *ExxonMobil Makes First Commercial Sale of Certified Circular*  
 28         *Polymers, supra*; indeed, ExxonMobil uses the terms “circular,” “recycled,” and “recycled  
 content” interchangeably in its various and many public announcements for its “advanced  
 recycling” technology and products.

1 circular polymers” are based on the deception that for every ton of plastic waste inputted into its  
 2 process, nearly a ton of “certified circular polymers” is produced—i.e., 92.6 to 100 percent yield.  
 3 ExxonMobil then charges a premium to its customers for these “certified circular polymers.” As  
 4 noted above, ExxonMobil destroys or turns into fuel (that will later be combusted) and other non-  
 5 circular products most of the plastic waste it feeds into its “advanced recycling” operation. If any  
 6 plastic waste is converted to new “recycled” plastic, at most it will constitute only 0.042 to 0.09  
 7 percent of the new plastic sold on an annual basis. Therefore, these customers are essentially  
 8 purchasing virgin plastics masquerading as “recycled” plastics.

9       277. Neither the average person, nor California law or federal policymakers,  
 10 understand this to be “recycling.” The definition of “recycling” in the California Public Resources  
 11 Code explicitly does not include plastic waste processed via pyrolysis or incineration.<sup>130</sup>  
 12 California Public Resources Code section 40180 clearly defines “Recycling” and specifically  
 13 states that it does not include “Transformation.” Public Resources Code section 40201 states:  
 14 “‘Transformation’ means incineration, **pyrolysis**, distillation, or biological conversion other than  
 15 composting.” (Emphasis added.) Likewise, Public Resources Code section 42355.51, subdivision  
 16 (f), states that “recycling,” “recyclable,” and “recyclability” do not include transformation, as  
 17 defined in Section 40201, . . . or production of fuels.” In addition, in its Draft National Strategy to  
 18 Prevent Plastic Pollution, the United States Environmental Protection Agency recently reaffirmed  
 19 its position that it does not consider plastic waste that is processed into fuels or for energy  
 20 production as “recycling.”<sup>131</sup>

21       278. ExxonMobil is also misleading its customers regarding the greenhouse gas  
 22 (GHG) reduction benefits of its “advanced recycling” process. ExxonMobil proactively and  
 23 repeatedly states that the materials produced through this process have a lower carbon footprint  
 24 compared to plastic made from fossil fuels.<sup>132</sup> However, a closer examination reveals significant

25       <sup>130</sup> Pub. Resources Code, § 40180.

26       <sup>131</sup> EPA Office of Resource Conservation and Recovery, U.S. Environmental Protection  
 27 Agency, Draft National Strategy to Prevent Plastic Pollution, *supra* [“EPA reaffirms that the  
 28 Agency does not consider activities that convert non-hazardous solid waste to fuels or fuel  
 substitutes (“plastics-to-fuel”) or for energy production to be “recycling” activities.”].

<sup>132</sup> ExxonMobil, *ExxonMobil Shares Carbon Footprint Assessment of Proprietary*

(continued...)

gaps and misleading claims.

279. ExxonMobil publicly claims that its “advanced recycling” technology enhances the circularity of plastics with reduced GHGs on a feedstock basis, but does not disclose the GHG emissions on the full plastic production basis that is needed to make an accurate comparison. For instance, in its 2023 Advancing Climate Solutions Progress Report, ExxonMobil stated, “Our advanced recycling technology enhances the circularity of plastics with reduced greenhouse gas emissions on a feedstock basis. According to a 2022 carbon footprint assessment by Sphera, every ton of waste plastic processed using our advanced recycling technology results in at least 19% lower greenhouse gas emissions compared to processing the same amount of crude-based feedstocks.”<sup>133</sup> Additionally, ExxonMobil states on its website that “waste plastic has a relatively low carbon footprint compared to fossil-based feedstock.”<sup>134</sup>

280. Contrary to ExxonMobil’s claims, full product life cycle assessments conducted by plastic producers like BASF<sup>135</sup> and SABIC<sup>136</sup> consistently show that the total carbon footprint for producing new olefins through pyrolysis of plastic waste and naphtha steam cracking exceeds that of virgin hydrocarbons. The BASF report found that pyrolysis of plastic waste to produce new plastic can only be claimed to emit less CO<sub>2</sub> (GHG) than production from virgin hydrocarbons if significant hypothetical savings of CO<sub>2</sub> (GHG) emissions from incineration of end-of-life plastic waste are included.”<sup>137</sup>

281. A separate Sphera report on plastic film recycling, commissioned by the Consumer Goods Forum (CGF), confirms that GHG emissions from pyrolysis “advanced recycling” and naphtha steam cracking are lower than emissions from virgin plastic production

*Advanced Recycling Technology* <[<sup>133</sup> ExxonMobil, 2023 Advancing Climate Solutions Progress Report \(Dec. 15, 2022\).](https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/carbon#:~:text=The%20following%20conclusions%20are%20from,amount%20of%20fossil%20based%20feedstock/> (as of July 29, 2024).</a></p>
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<sup>134</sup> ExxonMobil, *ExxonMobil Shares Carbon Footprint Assessment of Proprietary Advanced Recycling Technology*, *supra*.

<sup>135</sup> BASF, *Life Cycle Assessment (LCA) for ChemCycling and Measurement Program for Pyrolysis Oil* (Dec. 2023).

<sup>136</sup> SABIC, *Certified Circular Polymers via Advanced Recycling of Mixed Plastic Waste* (Mar. 2021).

<sup>137</sup> BASF, *ChemCycling: Environmental Evaluation by Life Cycle Assessment* (May 2020)

page 5.

1 **only** when the latter includes the hypothetical carbon emissions from incinerating virgin plastic  
 2 products at end of life.<sup>138</sup> However, when compared to producing and then landfilling virgin  
 3 plastic products (where end of life carbon emissions are not counted), the report finds that  
 4 “advanced recycling” emissions are 20 percent higher.<sup>139</sup> The CGF Sphera report indicates that  
 5 “advanced recycling” emissions are lower than emissions from virgin plastic when 45 percent of  
 6 virgin plastic is incinerated at end-of-life.<sup>140</sup> The assumption that 45 percent of virgin plastic is  
 7 incinerated at end-of-life is not credible because it is far higher than the current nine percent  
 8 plastic incineration rate in the U.S. according to the U.S. Department of Energy.<sup>141</sup> In California,  
 9 only about one percent of municipal waste is incinerated (transformed).<sup>142</sup>

10 282. Furthermore, the CGF Sphera report includes the hypothetical carbon emissions  
 11 from incinerating virgin plastic products at the end of life while omitting GHG emissions from  
 12 incinerating “advanced recycling” products at end-of-life, skewing the comparison in favor of  
 13 “advanced recycling.” Thus, claims that “advanced recycling” inherently results in lower GHG  
 14 emissions are based on the inclusion of inflated and deceptive assumptions about end-of-life  
 15 scenarios.

16 283. The American Chemistry Council, of which ExxonMobil is a member and  
 17 provides millions of dollars,<sup>143</sup> also touts the climate change benefits of ExxonMobil’s “advanced  
 18 recycling” process, stating: “In addition, co-processing plastic waste via ExxonMobil’s advanced  
 19 recycling approach results in lower greenhouse gas emissions than using virgin feedstocks when  
 20 analyzed on an ISO 14067 feedstock basis (ExxonMobil estimates; cradle-to-process unit outlet  
 21

22  
 23 <sup>138</sup> Sphera, *Life Cycle Assessment of Chemical Recycling for Food Grade Film, On behalf*  
 24 *of the Consumer Goods Forum* (Apr. 7, 2022) page 52 <[Life-Cycle-Assessment-of-Chemical-Recycling-for-Food-Grade-Film.pdf](#)> (as of July 29, 2024).

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

25 <sup>141</sup> Milbrandt et al., *Quantification and Evaluation of Plastic Waste in the United States*  
 26 (Apr. 22, 2022) Resources, Conservation and Recycling page 4 (funded by the U.S. Dept. of  
 Energy).

27 <sup>142</sup> Cal. Dept. of Resources Recycling and Recovery (CalRecycle), 2022 State of Disposal  
 and Recycling Report (Feb. 8, 2024) page 6 (Figure 1 “Estimated Management of 76 Million  
 Tons of Materials Generated in California in 2022”).

28 <sup>143</sup> See Parties Section III, above.

boundary).”<sup>144</sup>

284. Yet, ExxonMobil will not stand behind its process and product’s climate benefits and GHG emission reduction claims. To the contrary, ExxonMobil does not provide the Sphera Co-Processing Life Cycle Assessment Report to the public,<sup>145</sup> and, tellingly, it states elsewhere that its ISCC PLUS “certification” of its “certified circular polymers” is not a claim of GHG benefits.<sup>146</sup> While ExxonMobil publicly claims significant GHG reductions through its “advanced recycling” processes, these assertions are based on selective data presentation and problematic assumptions that mislead consumers.

**C. ExxonMobil Deceptively Suggests That Its “Advanced Recycling” Program Will Solve the Plastic Waste and Pollution Crisis, When in Reality It Will Only Account for 1 Percent or Less of Its Total Plastic Production Capacity by 2026.**

285. ExxonMobil makes public statements claiming that “advanced recycling” can “scale” to solve the global plastic waste and pollution crisis. Publicly, ExxonMobil claimed that the company’s advanced recycling operation was a “proven technology that is scalable.”

286. While ExxonMobil makes claims that “advanced recycling” is a revolutionary invention that would “scale” to solve the global plastic waste and pollution crisis, in reality ExxonMobil’s “advanced recycling” program will not even make a dent in displacing its own virgin plastic production. And ExxonMobil knows this. Its own chemical engineers point out that because the yield of its “advanced recycling” process is so low, “there will continue to be a growing need for virgin resin even as recycle rates are anticipated to increase.”

<sup>144</sup> American Chemistry Council, *ExxonMobil Working to Advance Plastics Recycling in Houston and Beyond* (June 7, 2022) <<https://www.americanchemistry.com/chemistry-in-america/news-trends/blog-post/2022/exxonmobil-working-to-advance-plastics-recycling-in-houston-and-beyond/>> (as of July 29, 2024).

<sup>145</sup> Bruggers, *Exxon’s New ‘Advanced Recycling’ Plant Raises Environmental Concerns*, *The Guardian* (Apr. 10, 2023) <<https://www.theguardian.com/us-news/2023/apr/10/exxon-advanced-recycling-plastic-environment/>> (as of July 29, 2024); Inside Climate News, *The Missing Equations at ExxonMobil’s Advanced Recycling Operation* (Nov. 1, 2023) <<https://insideclimatenews.org/news/01112023/missing-equations-exxonmobils-advanced-recycling-operation/>> (citing independent chemical engineer who called ExxonMobil’s climate estimates “dubious”) (as of July 29, 2024).

<sup>146</sup> ExxonMobil, *Expanding the Plastics Life Cycle* (Jan. 8, 2024) <<https://corporate.exxonmobil.com/sustainability-and-reports/sustainability/creating-sustainable-solutions/expanding-the-plastics-life-cycle#Strengtheningcircularitywithadvancedrecycling/>> (as of July 29, 2024); ISCC PLUS certification is discussed in more detail, *post*.

1           287.       According to documents filed by ExxonMobil with the U.S. Securities and  
2 Exchange Commission from 2008 to 2023, ExxonMobil’s plastic-making capacity (including  
3 polyethylene and polypropylene) increased 56 percent from 9.3 million tonnes in 2008 to 14.5  
4 million tonnes per year in 2023.

5           288.       ExxonMobil proudly boasts that by the end of 2026 it will process 500,000  
6 tonnes of plastic waste per year through its “advanced recycling” program. Based on  
7 ExxonMobil’s yield of only eight percent to new plastic, only 40,000 tonnes of new plastic would  
8 be produced from recycled plastic. This 40,000 tonnes of new plastic made from recycled plastic  
9 would only constitute a very small **0.27 percent** of ExxonMobil’s total plastic production  
10 capacity of 14.5 million tonnes in 2023. This is not surprising given that ExxonMobil has  
11 invested an unprecedented \$20 billion under its “Growing the Gulf” initiative to expand virgin  
12 plastic production capacity, and has only made \$154.5 million in capital investments for its  
13 “advanced recycling” program. This \$154.5 million investment in “advanced recycling” only  
14 constitutes **0.77 percent** of the \$20 billion ExxonMobil invested in ramping up virgin plastic  
15 production.

16           289.       And since ExxonMobil’s plastic production capacity is anticipated to increase  
17 by at least 2.5 million tonnes between 2023 and 2026, to 17 million tonnes per year, the fraction  
18 of new plastic made from recycled plastic waste could be even less (0.23 percent) by the end of  
19 2026.

20           290.       Therefore, even if ExxonMobil were somehow able to resolve all the economic  
21 and technical issues with its “advanced recycling” program and reach its 500,000 tonnes/year  
22 plastic waste processing promise, the impact would be negligible, especially in light of  
23 ExxonMobil’s intent to continue expanding its virgin plastic producing capacity. The numbers  
24 alone show that ExxonMobil’s “advanced recycling” program is a public relations stunt, without  
25 any prospect of meaningfully reducing the amounts of plastic waste or virgin plastic ExxonMobil  
26 produces. Despite deceptively touting its “revolutionary” “advanced recycling” program as a  
27 solution to the plastic waste crisis, ExxonMobil continues to knowingly overwhelm the waste  
28 management system with ever increasing volumes of virgin, single-use plastics.

291. ExxonMobil appears to have first publicly stated its very small global plastic waste processing goal in October 2021, with an achievement date of the end of 2026. However, there is evidence ExxonMobil is failing to make progress toward even this minor goal. In March 2021, ExxonMobil announced a collaboration with Plastic Energy to initially process 25,000 tonnes per year of plastic waste into pyrolysis oil that would be converted to new plastic in ExxonMobil's refinery in France. The anticipated start date was 2023, but no announcement of the pyrolysis unit startup was ever made. However, on April 11, 2024, ExxonMobil announced that it was shutting down the virgin plastics production unit at the refinery. This indicates that the pyrolysis unit will not be built and operated as promised.

292. In addition, in March 2022, ExxonMobil was reportedly considering its Baton Rouge, Louisiana refinery as a site that it would invest in an "advanced recycling" unit. This claim was repeated by ExxonMobil in public statements in subsequent years, including as recently as November 2023. But in February 2024, ExxonMobil's CEO stated that the investment in the "advanced recycling" unit in the Baton Rouge refinery was uncertain.

**D. ExxonMobil's Promotion of Its ISCC PLUS Certification Is Deceptive.**

293. ExxonMobil publicly touts that its "advanced recycling" polymers are "certified" by a third party, the International Sustainability and Carbon Certification (ISCC). ISCC is a German-based entity that provides various schemes for "certifying" products as being in line with its requirements. It is an unregulated, entirely voluntary process that is promoted by the chemical and plastics industries. ISCC states that "[w]ith our certification we contribute to environmentally, socially and economically sustainable production" and "[t]hrough the utilisation of recycled materials or materials derived from biological waste, companies can accelerate the transition to a circular economy." However, the ISCC certification scheme employed by ExxonMobil is actually a false and misleading marketing scheme, which ExxonMobil uses to mislead the public into believing that products made with "certified circular polymers" have significant environmental benefits or are made of plastic waste when in fact they likely contain little to no actual "advanced recycling" content.

294. ISCC's members are predominantly from the private sector, including the

1 chemical and plastics industries. ExxonMobil is a member of the ISCC Association, and has  
 2 participated on its technical committee. Although ISCC is not new, it has only recently started  
 3 providing certifications of plastic products via the ISCC PLUS certification scheme, starting in or  
 4 about 2018-2019.

5 295. ISCC’s certification programs for materials in other sectors have been criticized  
 6 as inadequate and have even been linked to scams, including in the European biofuels industry.  
 7 “Critics say [the ISCC] relies on self-reporting from companies and lacks systematic testing of  
 8 imports into the EU—a setup one analyst described as ‘essentially an honor system.’”<sup>147</sup>

9 296. ExxonMobil obtains ISCC PLUS certificates from an Emeryville, California-  
 10 based company named Scientific Systems, Inc. dba SCS Global Services. These “certificates”  
 11 provide minimal information. For example, no information is provided on the plastic waste source  
 12 (pre- or post-consumer), process amounts, process losses, byproducts produced, or yield of plastic  
 13 waste to new plastic production that would allow consumers to understand how much plastic  
 14 waste actually becomes new plastic and whether noncircular byproducts, such as fuels which will  
 15 be combusted, are produced.

16 297. These ISCC PLUS certificates purport to represent a certain amount of plastic  
 17 polymers that have been produced from plastic waste via ExxonMobil’s “advanced recycling”  
 18 facilities. ExxonMobil self-determines the number of certificates that it can sell and then sells  
 19 these certificates at a premium price to customers, such as plastic packaging companies, that  
 20 ExxonMobil knows would like to make environmentally friendly claims to the public.  
 21 ExxonMobil has made numerous false representations to the public, including Californians, that  
 22 the products “certified” by ISCC contain a certain percentage of “certified circular polymers,”  
 23 sometimes up to 90 to 100 percent. ExxonMobil has also made numerous misleading statements  
 24 to the public, including Californians, that its ISCC PLUS certification ensures “circularity” and  
 25 other substantial environmental benefits of the products that result from “advanced recycling.”

26 298. In reality, the ISCC PLUS certification utilized by ExxonMobil allows for little

27 <sup>147</sup> Moskowitz et al., *How Biofuels Scams Have Undermined A Flagship EU Climate*  
 28 *Policy* OCCRP (July 4, 2023) <<https://www.occrp.org/en/investigations/how-biofuels-scams-have-undermined-a-flagship-eu-climate-policy>> (as of July 29, 2024).

1 to no physical traceability between its “advanced recycled” polymers to the products that  
 2 consumers are purchasing. In fact, products marketed as having ISCC PLUS “certified circular  
 3 polymers” likely contain little to no physical recycled content or environmental benefits at all.  
 4 This is because the ISCC PLUS certification that ExxonMobil uses allows “mass balance” with  
 5 “free allocation” or “free attribution.”

6 299. “Mass balance” is an accounting approach used to track the inputs and outputs  
 7 of a substance throughout a process, such as the “advanced recycling” process. In the context of  
 8 “advanced recycling,” it allows companies to account for the conversion of a mixture of virgin  
 9 plastic and waste plastic to new plastic and other products through the processing system.

10 300. “Free allocation” takes “mass balance” into the imaginary realm and divorces  
 11 the need for end products to reflect the actual amount of physical waste plastic content that the  
 12 products contain. It is an accounting exercise by which ExxonMobil can choose to allocate all of  
 13 the waste plastic it puts into the system into one of many different end products, even if no actual  
 14 waste plastic polymers end up in that product.

15 301. As some advocates have observed, “The mass balance allocation approach is  
 16 fundamentally an artificial credit scheme that allows plastics and products companies to claim  
 17 fictionally high recycled content levels in certain products through the sale of credits.”<sup>148</sup>

18 302. A simple example helps explain the complex scheme. It would be entirely  
 19 deceptive to brand a bag of coffee as “100 percent decaffeinated” when only one percent of the  
 20 beans in the bag have been decaffeinated. The same logic applies to plastic packaging. It is  
 21 deceptive and misleading for companies to claim plastic packaging is made from “100 percent  
 22 circular” or “100 percent recycled plastic” when the physical content of the packaging is only  
 23 composed of one percent recycled plastics. Additionally, it would be equally deceptive for a  
 24 company to decaffeinate coffee at one facility and sell the rights to claim coffee produced at  
 25 another operation—which hasn’t decaffeinated its coffee—is decaffeinated.<sup>149</sup> This is essentially

26  
 27 <sup>148</sup> Just Zero et al., *Modifications to the Safer Choice Standard and Potential*  
*Implementation of a Safer Choice Cleaning Service Certification Program (EPA-HQ-OPPT-*  
*2023-0520)* (Jan. 16, 2024) page 2.

28 <sup>149</sup> *Ibid.*

1 what ExxonMobil does with its “certified circular polymers” under the ISCC PLUS mass balance  
2 with free allocation scheme.

3 303. Figure H, below, demonstrates how the mass balance approach with free  
4 allocation enables a company to falsely claim that plastic waste (recycled feedstock) that is made  
5 into fuel can be counted by companies as polymer “recycled content” under the ISCC PLUS  
6 guidelines.<sup>150</sup> In the hypothetical scenario shown in Figure H, below, 10 units of plastic waste  
7 (recycled feedstock) and 90 units of virgin plastic (virgin feedstock) are put into the “advanced  
8 recycling” system steam cracker.<sup>151</sup> While the vast majority—9 out of 10 units—of the plastic  
9 waste (recycled feedstock) actually become *non*-plastic products (5 units of the 10 units of  
10 recycled feedstock become fuel and 4 units of the 10 units become other non-polymer products),  
11 only 1 of the 10 units becomes a new plastic polymer. Nevertheless, the ISCC PLUS mass  
12 balance with free allocation scheme allows the company, on paper, to “shift” the plastic waste  
13 content of the fuel and non-polymer products over to the new plastic polymer product and claim  
14 that it is made *entirely* from recycled plastic waste—even though only 1 of its 10 units (10  
15 percent) actually came from plastic waste.

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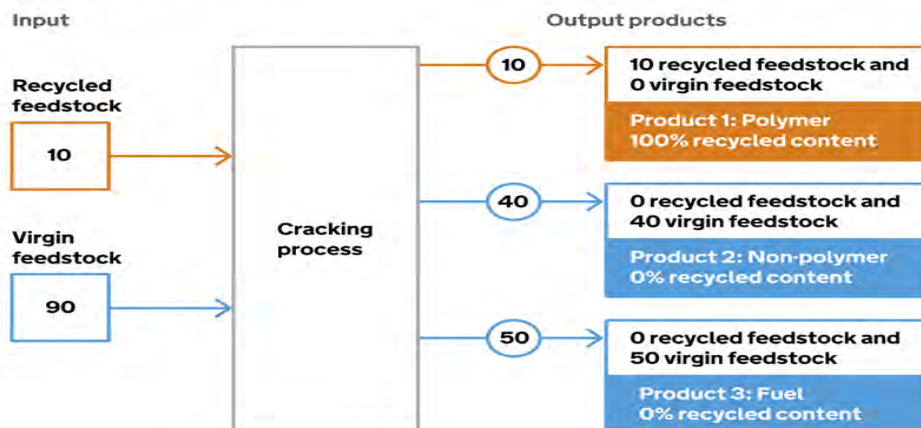
24 ///

25 \_\_\_\_\_  
26 <sup>150</sup> ISCC, ISCC System Documents <[https://www.iscc-system.org/certification/iscc-  
documents/iscc-system-documents/](https://www.iscc-system.org/certification/iscc-documents/iscc-system-documents/)> (as of July 29, 2024); ISCC, ISCC Plus (Mar. 6, 2024)  
27 <[iscc-system.org/wp-content/uploads/2024/03/ISCC-PLUS\\_v3.4.2.pdf](https://www.iscc-system.org/wp-content/uploads/2024/03/ISCC-PLUS_v3.4.2.pdf)> (as of July 29, 2024).

28 <sup>151</sup> As noted above, however, this hypothetical scenario of 10 percent recycled feedstock is actually not possible for ExxonMobil due to contamination; only a maximum of 2 percent of pyrolysis oil (recycled feedstock) can be fed to steam crackers.

Figure H: Free Allocation/Attribution Mass Balance Method<sup>152</sup>

Figure 1: Free allocation method



304. ISCC PLUS certification claims are not independently verified by any government or regulatory authority. Mass balance and free allocation have been widely criticized, including by some members of the plastics industry, precisely because it is deceptive to the public.<sup>153</sup> The U.S. Environmental Protection Agency recently rejected the use of mass balance in meeting its recycled content requirement for plastic products and packaging that seek to participate in the agency’s Safer Choice labeling program, which allows manufacturers to affix a “Safer Choice” label on certain consumer products that meet the program’s health and environmental criteria.<sup>154</sup>

<sup>152</sup> HM Revenue and Customs, *Plastic Packaging Tax – Chemical Recycling and Adoption of a Mass Balance Approach* (July 18, 2023) <<https://www.gov.uk/government/consultations/plastic-packaging-tax-chemical-recycling-and-adoption-of-a-mass-balance-approach/plastic-packaging-tax-chemical-recycling-and-adoption-of-a-mass-balance-approach#mass-balance-models/>> (as of July 29, 2024).

<sup>153</sup> U.S. Environmental Protection Agency, Draft National Strategy to Prevent Plastic Pollution, *supra*; Plastics News, *Chemical Recycling, Greenwashing Claims at Play in Mass Balance Discussions* (July 13, 2023); Morse, *Your ‘Recycled’ Grocery Bag Might Not Have Been Recycled* (Mar. 20, 2023) Undark <<https://undark.org/2023/03/20/your-recycled-grocery-bag-might-not-have-been-recycled/>> [verifying recycled content under mass balance relies on “tricky math”] (as of July 29, 2024); Beyond Plastics et al., *Chemical Recycling: A Dangerous Deception* (Oct. 2023) pages 42-44, 69-77; ECOS, *Determining Recycled Content With the ‘Mass Balance Approach’* (Feb. 10, 2021); Last Beach Cleanup et al., *Guides for the Use of Environmental Marketing Claims – Green Guides Review, Matter No. P954501 (Docket FTC-2022-0077)* (Apr. 24, 2023) pages 47-54; Just Zero et al., *Modifications to the Safer Choice Standard and Potential Implementation of a Safer Choice Cleaning Service Certification Program (EPA-HQ-OPPT-2023-0520)*, *supra*.

<sup>154</sup> Lisa Song, *Biden EPA Rejects Plastics Industry’s Fuzzy Math That Misleads Customers About Recycled Content*, ProPublica (Aug. 9, 2024), <https://www.propublica.org/article/epa-rejects-mass-balance-plastics-recycling-safer-choice>.

305. In a study conducted in March 2021, the Association of Plastic Recyclers (APR) found that virtually no adults know what the term “mass balance” means.<sup>155</sup> In APR’s April 24, 2023 comment letter to the Federal Trade Commission (FTC) regarding proposed updates to the FTC’s Guides for the Use of Environmental Marketing Claims (“Green Guides”),<sup>156</sup> APR explicitly stated that “There is particular concern about the use of free allocation methods under mass balance that may overstate the amount of recycled content in a given product.”<sup>157</sup> APR went on to state that:

[The FTC] should not permit recycled claims based on methods such as ‘mass balance,’ credit trading or similar systems. Consumers purchase a product with recycled content with the implied understanding there are recycled materials in that actual product, and claims must conform to that understanding. Making recycled content claims in on-pack labeling, based on mass balance calculations, is deceptive to the consumer because there is little to no physical traceability to prove that there is *any* physical recycled content in the actual product, which is what the consumer believes to be true.<sup>158</sup>  
(Emphasis in original.)

306. Similarly, the National Institute of Standards and Technology (NIST) reported that “[a] key characteristic of MB [mass balance] model is that the physical presence of the desired characteristic in the product is low or unknown.”<sup>159</sup> NIST found that mass balance has “many unsettled issues, ill-defined terms, and conflicting objectives with regards to the application of MB [mass balance] certification to polymers.”<sup>160</sup>

307. ExxonMobil justifies its use of mass balance as necessary because it is purportedly “impossible” to track molecules that originate from plastic waste. This is false, and ExxonMobil knows it. Internal documents show that ExxonMobil uses scientific analysis and testing to track what happens to the plastic waste it co-processes and steam cracks, including the specific proportion of the plastic waste that makes it out of the process as “recycled” plastic.

<sup>155</sup> The Assn. of Plastic Recyclers, *Recycling Terms Survey* (Mar. 2021) <<https://plasticsrecycling.org/images/library/Recycling-Terms-Survey2021.pdf>> (as of July 29, 2024).

<sup>156</sup> The Green Guides are a set of guidelines to help marketers avoid making environmental claims about products that can mislead consumers.

<sup>157</sup> The Assn. of Plastic Recyclers, *Comments of the Association of Plastic Recyclers Regarding Guides for the Use of Environmental Marketing Claims* (Apr. 24, 2023) page 32.

<sup>158</sup> *Id.* at page 2 (emphasis in original).

<sup>159</sup> Nat. Inst. of Stds. and Technology, U.S. Dept. of Commerce, *An Assessment of Mass Balance Accounting Methods for Polymers Workshop Report* (Feb. 2022) page 7.

<sup>160</sup> *Id.* at page v.

308. Under the false cloak of legitimacy of being “ISCC PLUS certified,” ExxonMobil has knowingly deceived the public into believing that its “advanced recycling” operations have significant environmental benefits, creating products that are “circular” and “recycled.” ExxonMobil has a massive financial interest in ensuring that mass balance free allocation methods are accepted broadly and even enshrined in law. Indeed, continuing the public deception is ExxonMobil’s business model.

**E. ExxonMobil Knows That Its “Advanced Recycling” Program Is Not Economically Viable.**

309. Despite the technical limitations of “advanced recycling,” ExxonMobil continues its campaign of deception about the economic viability and commercial scalability of its “advanced recycling” operations. In its 2022 annual report, ExxonMobil boasts that, “We are uniquely positioned with our scale, integration, and technology to expand advanced recycling capacity to help broaden the range of plastics that society recycles.” In a social media post, ExxonMobil claims that its “advanced recycling” technology is “commercial and scalable” and that the corporation is attempting to “scale the technology around the world.”<sup>161</sup> ExxonMobil further states that it is creating “opportunities to capture value from plastic waste at scale.”<sup>162</sup> These representations about the economic viability of “advanced recycling” have been a part of ExxonMobil’s strategy since even before its first “advanced recycling” facility at Baytown began operation in December 2022: a 2020 internal ExxonMobil presentation advised executives to “[p]romote advanced recycling as scalable, GHG-advantaged solution to help address plastic waste.”

310. ExxonMobil also touts the commercial value of both plastic waste and its recycled plastics. It characterizes discarded plastics as having “enormous benefits” and being “too

<sup>161</sup> ExxonMobil Chemical, Twitter (Aug. 29, 2023) <[https://twitter.com/XOM\\_Chemical/status/1696540786190401804](https://twitter.com/XOM_Chemical/status/1696540786190401804)> (as of July 31, 2024); see also *ExxonMobil, Advanced Recycling Technology Supports the Circular Economy for Plastic Around the World* [https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/exxtend-goes-global?utm\\_source=twitter&utm\\_medium=social&utm\\_campaign=chemical\\_exxtend&utm\\_content=argoesglobal\\_aug29](https://www.exxonmobilchemical.com/en/exxonmobil-chemical/sustainability/advanced-recycling-technology/exxtend-goes-global?utm_source=twitter&utm_medium=social&utm_campaign=chemical_exxtend&utm_content=argoesglobal_aug29) (as of July 29, 2024).

<sup>162</sup> ExxonMobil, X (formerly Twitter) (Mar. 31, 2021) <<https://x.com/exxonmobil/status/1377352081976094720>> (as of July 31, 2024).

1 valuable to waste.” ExxonMobil emphasizes that it needs “more plastic to feed into our Baytown  
 2 facility,” that it wants the plastic waste “out of the landfill” and “into the blue bins so that it’s  
 3 sorted,” and it would “love to take it” into its facility. It further claims that recycled plastics are  
 4 “new valuable products needed for modern life.”<sup>163</sup>

5 311. In reality, “advanced recycling” has never been economically viable for a host  
 6 of reasons. First, the process of collecting, sorting, transporting, and reprocessing plastic waste is  
 7 immensely expensive. Increases in diesel prices make the cost of trucking plastic waste even  
 8 greater. In fact, the uncertainty in feedstock costs has led ExxonMobil to be “very cautious” in its  
 9 capital expenditures for “advanced recycling” projects.

10 312. Second, in order to produce recycled plastics, “advanced recycling” requires  
 11 “very pure,” uniform, and high-quality feedstock. ExxonMobil itself has recognized that “[a]ccess  
 12 to quality feed” is “key” to the “scale up of Advanced Recycling,” and that “[r]oadblocks to  
 13 advanced recycling include the “[s]peed of supply chain development [and] plastic waste  
 14 quality.” The use of a very heterogeneous feedstock creates a challenging obstacle, as even “small  
 15 amounts of problematic substances ... can lead to the failure of a whole process approach.”<sup>164</sup>  
 16 However, homogenous feedstock is difficult and expensive to obtain on a commercial scale. In  
 17 fact, FCC Environmental Services, a waste management and recycling company, expressed  
 18 strong concerns with promoting competition between mechanical and chemical recycling  
 19 facilities for feedstock, and with diversion of plastics from mechanical recycling to “advanced  
 20 recycling.” In October 2023, FCC Environmental Services turned down ExxonMobil’s proposal  
 21 for FCC to clean and sort plastic film waste for feedstock because ExxonMobil’s feedstock  
 22 specifications for their “advanced recycling” process were stricter than those for mechanical  
 23 recycling, the proposed price did “not make economical sense” to FCC, and FCC thought there  
 24 was a “very uncertain return scenario” compared to the market for mechanical recycling.

25 313. Third, the production of higher quality virgin plastic is cheaper. New high

26 <sup>163</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at  
 27 page 4 (citing ExxonMobil Facebook post (Sept. 6, 2023) <<https://www.facebook.com/ads/library/?id=623208426597156>> [as of July 29, 2024]).

28 <sup>164</sup> Quicker et al., *Chemical Recycling: A Critical Assessment of Potential Process Approaches*, (Mar. 15, 2022) 40 *Waste Management and Research* 10 pages 1501-1502.

quality virgin plastics use less costly virgin hydrocarbon feedstock, and require much less time, labor, truck transport, processing, and equipment than that needed to produce lower quality recycled plastic. One study found that resins recovered through plastic-to-plastic “advanced recycling” are 1.6 times more expensive than virgin resins.<sup>165</sup> Petrochemical companies therefore have financial incentives to continue making and selling low-cost virgin plastic. And that is what these companies, including ExxonMobil, continue to do and to invest in.

314. Fourth, ExxonMobil and other petrochemical companies’ unceasing production of hundreds of billions of dollars of cheap, virgin plastic resins every year—amounting to 460 million tonnes of cheap new plastic production annually in 2019<sup>166</sup>—floods the market and makes higher-cost recycled plastic uncompetitive.

315. The economic problems with recycling plastics are well-known and widespread throughout the petrochemical industry, and are not significantly different for mechanical versus “advanced” recycling. As one industry insider wrote 50 years ago, “[t]here is serious doubt that [recycling plastic] can ever be made viable on an economic basis.”<sup>167</sup> Another explained that “chemical recycling” “require[s] greater energy inputs than it save[s]” and is therefore an “energy-loser.”<sup>168</sup> Larry Thomas, former president of the Society of the Plastics Industry, observed that the petrochemical industry has no economic incentive to produce recycled plastics when their business is producing “as much oil as you possibly can” and selling virgin material.<sup>169</sup>

316. ExxonMobil has known for at least 30 years that “advanced recycling” could never be economically feasible, and, therefore, would not be scaled up. In a 1994 meeting with

<sup>165</sup> *Id.* (citing Yadav et al., *Techno-Economic Analysis and Life Cycle Assessment for Catalytic Fast Pyrolysis of Mixed Plastic Waste* (June 5, 2023) 16 Energy & Environmental Science 9).

<sup>166</sup> OECD, *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options* (Feb. 22, 2022).

<sup>167</sup> Sullivan, *How Big Oil Misled the Public Into Believing Plastic Would Be Recycled*, NPR (Sept. 11, 2020) <<https://www.npr.org/2020/09/11/897692090/how-big-oil-misled-the-public-into-believing-plastic-would-be-recycled>> (as of July 29, 2024).

<sup>168</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at pages 25-26 (citing Griff, *Is Recycling Good for the Environment?* 4 (2003) <<https://griffex.com/wp-content/uploads/2020/09/Griff-gpec-and-tables.pdf?c772ab&c772ab>> (as of July 29, 2024)).

<sup>169</sup> Sullivan, *How Big Oil Misled the Public Into Believing Plastic Would Be Recycled*, *supra*.

1 APC staffers, Exxon Chemical Vice President Irwin Levowitz called pyrolysis a “fundamentally  
2 uneconomical process.”<sup>170</sup> This remains true today.

3 317. Indeed, the economic pitfalls of “advanced recycling” are reflected not only in  
4 speeches, studies, and white papers, but also in the consistent failure of “advanced recycling”  
5 facilities to demonstrate viability over the past decades. No chemical recycling project in the last  
6 20 years has successfully recycled plastic at a commercial scale.<sup>171</sup> This is not due to any lack of  
7 public investment or corporate resources to invest in these projects, if they desire. In fact, since  
8 2017, at least \$500 million in public funds have been spent on 51 U.S. “advanced recycling”  
9 projects.<sup>172</sup> And U.S. residents pay approximately \$4.2 to \$5.9 billion each year, mostly in local  
10 taxes, for the collection of recycling materials from curbside bins.

11 318. These investments in “advanced recycling” ultimately did not move the needle  
12 to establish “advanced recycling” as economically viable. Internal documents from 2020 show  
13 that ExxonMobil’s target rate of return on co-processing of plastic waste in a coker would depend  
14 largely on the price of plastic waste feedstock and would not be at all profitable above a certain  
15 price point. But this price point for plastic waste feedstock was not realistic or possible: in 2021,  
16 ExxonMobil was informed that “all-in delivered costs of post-consumer post-use plastics to  
17 Baytown facility” would average a significantly higher price per pound even if ExxonMobil  
18 invested in a sorting facility. Thus, ExxonMobil is struggling to find affordable, suitable plastic  
19 waste feedstock in sufficient amounts to use as feed in its cokers.

20 319. The lack of profitability from “advanced recycling” plastic waste led  
21 ExxonMobil to develop a business model based on the sales of circular credits at a premium over  
22 the cost of virgin plastic. But 2021 internal documents show that “advanced recycling” projects  
23 would not meet ExxonMobil’s profitability requirements unless a substantial “Circular Premium”  
24 was charged on the “advanced recycling” product above the cost of virgin plastic produced. In

25 \_\_\_\_\_  
26 <sup>170</sup> Allen et al., Center for Climate Integrity, *The Fraud of Plastic Recycling*, *supra*, at  
page 26 (citing Condrey, *ART Meeting-Houston*, at 27 (Jan. 26, 1994)).

27 <sup>171</sup> Brock et al., *The Recycling Myth: Big Oil’s Solution for Plastic Waste Littered with*  
*Failure*, A Reuters Special Report (July 29, 2021) <[https://www.reuters.com/investigates/special-](https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/)  
28 [report/environment-plastic-oil-recycling/](https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/)> (as of July 29, 2024).

<sup>172</sup> *Ibid.*

1 other words, customers would have to pay significantly more for the “advanced recycling”  
2 product than for virgin plastic. One way to charge customers for the “Circular Premium” would  
3 be to offer customers a “Circular Certificate” provided by ISCC.<sup>173</sup> But ExxonMobil’s internal  
4 documents reflect that even if customers were willing to pay a substantial “Circular Premium” to  
5 purchase a “Circular Certificate,” ExxonMobil still had to limit plastic feedstock costs to a  
6 specific “breakeven” price range to meet corporate profitability requirements. ExxonMobil is  
7 paying multiples of that range for delivery of plastic feedstock.

8 320. Moreover, ExxonMobil has failed to meet its own internal schedules for starting  
9 up and making final investment decisions for a number of potential “advanced recycling”  
10 installations. ExxonMobil considers its Baytown facility as small scale, and has so far refrained  
11 from “plac[ing] bets on” large or full-scale “advanced recycling” projects, despite ExxonMobil’s  
12 claims that such projects are economically viable and scalable. In fact, in September 2022,  
13 ExxonMobil discussed a delay, or “decompression” of its “advanced recycling” project schedule.  
14 ExxonMobil’s Baytown project is operating at a loss of many millions of dollars per year.  
15 Overall, ExxonMobil projected that its “advanced recycling” projects would operate at a nine-  
16 figure net cash loss in 2023, and that its only path to future profitability was to secure steady,  
17 low-cost plastic waste feed suitable for its flexicoker unit and to sell thousands of Circular  
18 Certificates at a high premium over virgin plastic.

19 321. ExxonMobil well knows that “advanced recycling” will not be scaled up  
20 without profitability, yet ExxonMobil continues to represent to the public that “advanced  
21 recycling” is a realistic solution to the plastic waste and pollution crisis. In October 2023,  
22 ExxonMobil asserted that growing demand for recycled plastic was driving investment, and that  
23 the company’s “advanced recycling” operation was a “proven technology that is scalable.” A  
24 month later, ExxonMobil boasted that it was “looking at potential new [advanced recycling]  
25 facilities at other sites in the United States, as well as in Canada, Belgium, the Netherlands and  
26 Singapore. All told, we expect to have the capacity to process a billion pounds [500,000 tonnes]

27 \_\_\_\_\_  
28 <sup>173</sup> As discussed in Subsection D, above, these certificates are in and of themselves  
deceptive.

per year around the world by the end of 2026.” ExxonMobil’s 2026 goal depends on the success of its Baytown “advanced recycling” operations, which ExxonMobil advertises as having the capacity to co-process 40,000 tonnes of plastic waste per year. However, ExxonMobil has struggled to achieve this 40,000 tonnes per year capacity because of technical limitations of co-processing plastic waste in cokers, and has deliberately limited the amount of plastic waste it feeds its cokers to far less than its claimed 40,000 tonnes per year capacity. Consequently, because ExxonMobil is co-processing less plastic waste, it is not producing the anticipated amount of “Circular Certificates” to make its “advanced recycling” program profitable.

322. Thus, despite ExxonMobil’s public claims, the company has failed to: (1) produce and sell the planned amount of “Circular Certificates”; and (2) obtain suitable homogenous plastic feedstock within its “breakeven” price range, both of which are required to achieve the profit level that the company requires.

323. In an attempt to address plastic feedstock cost, in February 2021, ExxonMobil and a “chemical recycling” company, Agilyx Corporation (Agilyx), announced a joint venture establishing Cyclyx International LLC (Cyclyx). Cyclyx was established to aggregate and pre-process plastic waste for “advanced recycling” projects. ExxonMobil owns 25 percent of Cyclyx, LyondellBassell owns 25 percent, and Agilyx owns 50 percent. As part of the joint venture, Cyclyx would supply ExxonMobil with plastic waste feedstock. Cyclyx, which calls itself a “[f]or profit corporation acting like a non-profit collaborative for the benefit of its members,” advertises its “mission” as to “help increase the plastics recycling rate from 10 to 90% by getting the right feed to the right technology.”<sup>174</sup> This goal, however, is not achievable in light of the technical and economic limitations that have persisted for decades.

324. According to ExxonMobil, a Cyclyx Circularity Center would be built to produce feedstock for both mechanical and “advanced” recycling, and would “leverage new technologies to analyze plastics based on their composition and sort them according to customer

<sup>174</sup> BIC Magazine, *Cyclyx, ExxonMobil and LyondellBasell Jointly Pursue Plastic Processing Facility in Houston* (Oct. 19, 2022) <<https://www.bicmagazine.com/projects-expansions/renewable-sustainability-h2-esg/cyclyx-exxonmobil-and-lyondellbasell-jointly-pursue-plastic/>> (as of July 29, 2024).

1 specifications for their highest and best reuse.” In an April 27, 2023 press release, ExxonMobil,  
 2 Cyclyx, and other partners announced their “intention to be the first in the United States to  
 3 successfully launch a circular food packing proof of concept leveraging advanced recycling.”  
 4 ExxonMobil touted a “successful demo” where “plastic waste was collected from grocery stores,  
 5 diverting it from landfills.” According to ExxonMobil, this “demo” showed that “creating a  
 6 circular economy is achievable with value chain collaboration” and that “the process is now being  
 7 evaluated for scale.”

8 325. ExxonMobil and its partners, which now include another petrochemical  
 9 company, LyondellBasell Industries, announced an expected start-up date for the Cyclyx  
 10 Circularity Center in 2024, with an investment of approximately \$100 million contingent on a  
 11 final investment decision in early 2023.

12 326. Internally, however, ExxonMobil questioned Cyclyx’s viability. It described  
 13 Cyclyx as “loss making” and asked, “what is the plan to make it break even.” These doubts are  
 14 compounded by Cyclyx’s 2021 report to ExxonMobil, stating that even if ExxonMobil invested  
 15 in a Cyclyx sorting facility, plastic waste feedstock would cost ExxonMobil an average amount  
 16 well above the “breakeven” cost. ExxonMobil did not make a final investment decision on  
 17 funding the Cyclyx Circularity Center until December 2023, after FCC Environmental Services  
 18 rejected ExxonMobil’s proposal.<sup>175</sup> According to ExxonMobil, the center will now have an  
 19 expected start-up date of mid-2025.

20 327. Despite ExxonMobil’s internal misgivings, Cyclyx’s own statements that  
 21 plastic waste feedstock is not consistently available, and the lengthy delay in funding the Cyclyx  
 22 Circularity Center, ExxonMobil misleadingly claims that the circularity center “will accept,  
 23 analyze and process a range of plastic, including difficult-to-recycle materials, such as food  
 24 packaging, chip bags and bottle caps.” However, ExxonMobil knows that it is not possible, either  
 25 technically or economically, to recycle these materials at a rate even remotely approaching 90  
 26 percent, as Cyclyx identifies as its mission. Additionally, an internal document shows that

27 <sup>175</sup> Kazdin, *Cyclyx Announces Final Investment Decision for Circularity Center*,  
 28 Recycling Today (Dec. 7, 2023) <<https://www.recyclingtoday.com/news/cyclyx-final-investment-decision-circularity-center/>> (as of July 29, 2024).

1 ExxonMobil did not expect to meet its advertised goal of processing 500,000 tonnes, or one  
2 billion pounds, of plastic waste by 2026. Instead, it planned to process only a fraction of its stated  
3 goal by the end of 2026 and did not even expect to meet its 2026 goal by 2028. Yet  
4 ExxonMobil’s website still advertises its abandoned goal to “ramp up” its “advanced recycling”  
5 “processing capabilities to 500 kTa [0.5 million tonnes], or one billion pounds, of waste plastic by  
6 year-end 2026.”

7 328. ExxonMobil also deceives the public about the economic viability of obtaining  
8 feedstock for “advanced recycling” through its involvement in the Houston Recycling  
9 Collaboration. In January 2022, the Houston Recycling Collaboration was formed by  
10 ExxonMobil, the City of Houston, LyondellBasell, Cyclyx International, and FCC Environmental  
11 Services through a memorandum of understanding. The claimed goal of the collaboration is to  
12 “Collect **all** plastic—no matter the type—from water bottles and bubble wrap to dry cleaner bags  
13 and takeout containers” and drop off the collected plastics at “recycling takeback locations to be  
14 implemented across the city.” The plastics would be collected at facilities including the  
15 Kingwood Neighborhood Recycling Center, which would then supposedly provide feedstock to  
16 ExxonMobil’s Baytown “advanced recycling” plant. In public videos on platforms reachable by  
17 Californians, ExxonMobil representatives said the Baytown “advanced recycling” facility needed  
18 plastic feedstock and that Kingwood residents can drop their plastics off at the Kingwood  
19 collection site, to be transported and recycled at the ExxonMobil Baytown facility. The local  
20 television news segment that aired in Houston told residents that plastic waste collected at the  
21 Kingwood collection site would be recycled at ExxonMobil’s Baytown facility.

22 329. However, in June through September 2023, an environmental group attached  
23 tracking devices to 11 plastic items that they dropped into the collection bins at Kingwood  
24 Neighborhood Recycling Center and the North Main Neighborhood Recycling Center. At their  
25 final location, all 11 devices led to an open-air waste management site, where all 11 plastic items  
26 had been tossed alongside a fence along with other plastic waste—not to Baytown or any other  
27  
28

1 recycling facility.<sup>176</sup> In response to this report, ExxonMobil repeated its deceptive claim that  
 2 “[a]dvanced recycling is a proven technology” that can help “address the challenge of plastic  
 3 waste” and that ExxonMobil was working “to help increase the amount of plastics that enter the  
 4 [‘advanced recycling’] supply chain.”<sup>177</sup>

5 330. Again, ExxonMobil relies on the same public deception playbook: boasting  
 6 about the technical and economic viability of “advanced recycling,” announcing steps towards  
 7 establishing recycling ventures, then ultimately failing to recycle any substantial percentage of the  
 8 plastic waste generated by ExxonMobil itself, let alone the plastics industry. However, there is no  
 9 pathway through which “advanced recycling” can become technically or economically viable.

10 331. Instead, ExxonMobil tries to generate sufficient income through its “advanced  
 11 recycling” projects by selling false and deceptive recycling certifications, as described above.

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26 <sup>176</sup> Bruggers, *Dumped, Not Recycled? Electronic Tracking Raises Questions About*  
 27 *Houston’s Drive to Repurpose a Full Range of Plastics*, Inside Climate News (Nov. 1, 2023)  
 28 <<https://insideclimatenews.org/news/01112023/electronic-tracking-questions-houstons-drive-to-repurpose-plastics/>> (as of July 29, 2024).

<sup>177</sup> *Ibid.*

**F. ExxonMobil Targets Its Deceptive “Advanced Recycling” Messages to California Consumers, Businesses, and Law and Policy Makers.**

332. ExxonMobil spreads its deceptive “advanced recycling” messages broadly and aggressively on multiple social media platforms, including but not limited to LinkedIn, Twitter, Facebook, Instagram, and YouTube. On Twitter (now called “X”), ExxonMobil made false claims about its technical ability to process post-consumer plastics, despite internally understanding that post-consumer plastics are too contaminated to co-process in significant volumes. For example, on November 24, 2021, ExxonMobil tweeted<sup>178</sup>:



<sup>178</sup> ExxonMobil, X (formerly Twitter) (Nov. 24, 2021) <<https://x.com/exxonmobil/status/1463596818521112590?s=20>> (as of July 29, 2024).

333. On November 15, 2022, ExxonMobil tweeted<sup>179</sup>:



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<sup>179</sup> ExxonMobil, X (formerly Twitter) (Nov. 15, 2022)

<<https://x.com/exxonmobil/status/1592606620231421952?s=20>> (as of July 29, 2024).

334. On March 1, 2023, ExxonMobil tweeted<sup>180</sup>:



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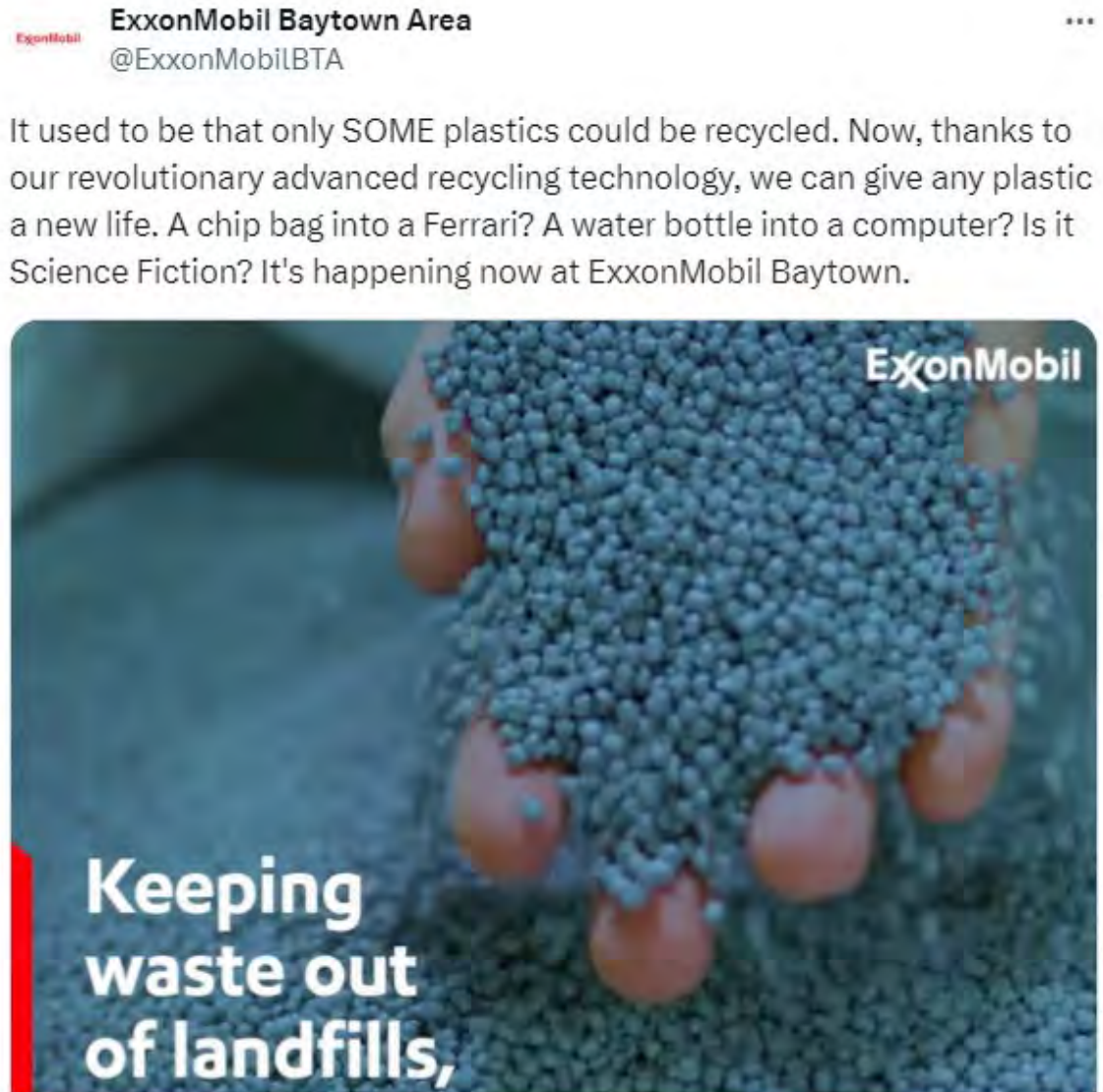
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<sup>180</sup> ExxonMobil, X (formerly Twitter) (Mar. 1, 2023) <https://twitter.com/exxonmobil/status/1630964258535030789> > (as of July 29, 2024).

335. On August 28, 2023, ExxonMobil Baytown Area tweeted<sup>181</sup>:



336. Similarly, though not pictured:

- On March 7, 2022, ExxonMobil tweeted false claims about its “advanced recycling” program’s ability to “recycle” a plastic product “over multiple recycling loops,” despite knowing the fact that most, if not all, of the plastic is destroyed or turned into fuel and other non-circular products in the process.<sup>182</sup>

<sup>181</sup>ExxonMobil Baytown Area, X (formerly Twitter) (Aug. 28, 2023) <<https://x.com/exxonmobilbta/status/1696261899652931725?s=46&t=OBruA2TmyQn2AZvSTYmlOQ>> (as of July 29, 2024).

<sup>182</sup>ExxonMobil Chemical, X (formerly Twitter) (Mar. 7, 2022) <[https://twitter.com/XOM\\_Chemical/status/1500876771310379013/](https://twitter.com/XOM_Chemical/status/1500876771310379013/)> (as of July 29, 2024).

- On August 29, 2023, ExxonMobil Chemical tweeted misleading claims that “advanced recycling” is “commercial and scalable,” and that “it is pursuing ambitions to scale this technology around the world.”<sup>183</sup>
- On October 5, 2022, ExxonMobil pushed claims that its “advanced recycling” technology—i.e., co-processing plastic waste in cokers—was a new technology, despite Mobil having patented the technology in the 1970s.<sup>184</sup>

337. On YouTube, ExxonMobil posts numerous deceptive videos expounding the environmental virtues of “advanced recycling.” For example, one video dated May 2, 2023, clearly implies that all the plastic waste being brought to the Baytown facility comes out as new plastic.<sup>185</sup> The video also deceptively claims that the “advanced recycling” process decreases the amount of GHG emissions by 19 to 49 percent compared to virgin plastic.<sup>186</sup>

338. ExxonMobil sponsored another YouTube video dated May 1, 2023, featuring its partnership with Cyclyx, Sealed Air, and Ahold Delhaize USA, which makes clear that consumers consider the reusability and recyclability of packaging when making purchases.<sup>187</sup> It then leads consumers to believe that the plastic waste being “recycled” is going directly into the containers they buy at grocery stores.<sup>188</sup> In another video dated February 16, 2024, titled “Recycling is Real,” with partners Cyclyx and TenCate, an ExxonMobil representative states, “Advanced recycling is key to taking recycling rates to the next level.”<sup>189</sup>

339. ExxonMobil targets Californians with deceptive digital advertisements regarding “advanced recycling.” For example, ExxonMobil has paid for Facebook advertisements to Californians falsely claiming that, for “advanced recycling,” “every ton of

<sup>183</sup> ExxonMobil, X (formerly Twitter) (Aug. 29, 2023) <[https://twitter.com/XOM\\_Chemical/status/1696540786190401804/](https://twitter.com/XOM_Chemical/status/1696540786190401804/)> (as of July 29, 2024).

<sup>184</sup> ExxonMobil, X (formerly Twitter) (Oct. 5, 2022) <<https://twitter.com/exxonmobil/status/1577705288643256321>> (as of July 29, 2024).

<sup>185</sup> ExxonMobil Chemical, *ExxonMobil's Exxtend Technology for Advanced Recycling Virtual Tour* (May 2, 2023) YouTube <[https://www.youtube.com/watch?v=pFaJr\\_4zi3Y/](https://www.youtube.com/watch?v=pFaJr_4zi3Y/)> (as of July 29, 2024).

<sup>186</sup> *Ibid.*; see paragraph 273-79, above.

<sup>187</sup> ExxonMobil Chemical, *News Release: Cyclyx, Sealed Air, and Ahold Delhaize USA Demo Advanced Recycling for Plastic Waste*, *supra*.

<sup>188</sup> *Ibid.*

<sup>189</sup> Plastics Industry Assn., *Recycling Is Real: ExxonMobil, Cyclyx, TenCate* (Feb. 16, 2024) YouTube <<https://www.youtube.com/watch?v=W7H6OkpO3Z4/>> (as of July 29, 2024).

1 plastic waste we process, society reduces the need to process approximately one ton of fossil fuel  
2 derived feedstocks.”<sup>190</sup>

3 340. Internal ExxonMobil documents show that it targets specific media markets  
4 including California to push deceptive “advanced recycling” messages as a way to “increase  
5 education on what advanced recycling is and how [ExxonMobil] is leading the way.”

6 341. ExxonMobil targets California businesses and businesses that otherwise do  
7 business in California with its deceptive “advanced recycling” messaging at trade shows and  
8 other events.<sup>191</sup>

9 342. ExxonMobil directs its “advanced recycling” messages to California to  
10 influence legislation in order to further its deceptive marketing. For example, ExxonMobil paid  
11 millions to the American Chemistry Council to fight a restrictive ballot measure that would have  
12 established an extended producer responsibility program for plastic products in California.

13 **G. ExxonMobil Directs and Colludes with Trade Groups to Amplify Its**  
14 **Deceptive “Advanced Recycling” Messages.**

15 343. As stated above, ExxonMobil is a member of the American Chemistry Council  
16 (ACC), the foremost trade group for the plastics industry. According to ExxonMobil’s public  
17 lobbying reports, ExxonMobil spent tens of millions of dollars on various trade groups and  
18 grassroots lobbying. ExxonMobil used these trade groups to advance its deceptive messaging  
19 around “advanced recycling,” in an effort to mislead the public. Internal documents reveal that a  
20 critical component of ExxonMobil’s “advanced recycling” program is to amplify its deceptive  
21 messaging through trade groups. Additional internal documents show close coordination with key  
22 trade groups such as the American Chemistry Council to spread deceptive “advanced recycling”  
23 messages.

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25 <sup>190</sup> See Facebook Digital Ad Library, search “ExxonMobil,” Library ID  
811271790836528 (as of May 29, 2024).

26 <sup>191</sup> See, e.g., Spielman, *MD&M West 2024: Record-Setting Rainfall Didn’t Keep*  
27 *Attendees Away from the Monday MiniTec Track*, Machine Design (Feb. 6, 2024) [ExxonMobil  
gave presentation at California medical device conference on the benefits of “advanced  
28 recycling”]; Printpack, *ExxonMobil, Pacific Coast Producers Bring Circularity to Fruit Cups*,  
*supra* [ExxonMobil makes deal for “certified circular polymers” with California-based Pacific  
Coast Producers].

344. Trade groups have widely spread deceptive “advanced recycling” messages. One of these groups is called America’s Plastic Makers. America’s Plastic Makers is a campaign of the ACC’s Plastics Division, which is made up of ExxonMobil and other businesses in the plastics industry. America’s Plastic Makers is behind a concerted effort promoting “advanced recycling” as a “new” solution to the plastic waste and pollution crisis.

345. The ACC’s digital advertising on “advanced recycling” continues to accelerate. The ACC spent \$97,000 in 2021, \$265,000 in 2022, and \$526,000 in the first few months of 2023 on Facebook and Instagram ads that falsely promoted “advanced recycling” as part of a “circular economy” for plastics. The ACC often advertises by paying for the advertisements that Americas Plastic Makers runs on online platforms such as Facebook.

346. And Californians are often among the targets for these ads.<sup>192</sup> For example, America’s Plastic Makers ran an ad campaign “Paid for by The American Chemistry Council” from February 21-22, 2023 with 50,000 to 60,000 thousand impressions, 16 percent of which were in California. The ad proclaims that “ExxonMobil is turning used plastic into new plastic at its facility in Texas. Follow a chip bag as it goes through one of the largest Advanced Recycling facilities in North America: <https://www.youtube.com/watch?v=QTh5ST38fLY>.”<sup>193</sup> That linked YouTube video misrepresents that “advanced recycling” converts plastic waste molecules to become “new plastics,” attempting to deceive Californians into believing that an old chip bag will become new plastic.<sup>194</sup>

347. ExxonMobil is a key funder of America’s Plastic Makers, just as it was a key funder of the deceptive Council for Solid Waste Solutions in the 1980s and 1990s. Internal documents show that from 2020 to 2023, ExxonMobil gave the ACC \$19.4 million to run the

<sup>192</sup> See Facebook Digital Ad Library Report, Spending Tracker (search for “America’s Plastic Makers”) <<https://www.facebook.com/ads/library/report/?source=nav-header>> (as of May 29, 2024, America’s Plastic Makers had spent \$76,592 on advertisements in California in the past 90 days (Feb. 27, 2024 to May 26, 2024)).

<sup>193</sup> See Facebook Digital Ad Library, Library ID 488499916638064 <[https://www.facebook.com/ads/library/?active\\_status=all&ad\\_type=all&country=US&view\\_all\\_page\\_id=106244251043808&search\\_type=page&media\\_type=all](https://www.facebook.com/ads/library/?active_status=all&ad_type=all&country=US&view_all_page_id=106244251043808&search_type=page&media_type=all)> (as of July 29, 2024).

<sup>194</sup> KPRC 2, *Efforts of Advanced Recycling*, *supra*.

1 “American Plastic Makers campaign [and] national policy advocacy.”<sup>195</sup> Since 2023, America’s  
 2 Plastic Makers spent \$30 million on an ad campaign promoting deceptions about “advanced  
 3 recycling.”<sup>196</sup>

4 348. One particular ad has been far-reaching and has been broadcast on major  
 5 television networks and on YouTube, including in California. There are at least two versions of  
 6 this ad, one that is 30 seconds long, and the other 15 seconds long. The 30-second ad states,  
 7 “Imagine a future where plastic is not wasted but instead remade over and over into the things  
 8 that keep our food fresher, our families safer, and our planet cleaner. To help us get there,  
 9 America’s Plastic Makers are investing billions of dollars to create innovative products and new  
 10 recycling technologies for sustainable change. Because when you push for smarter solutions, big  
 11 things can happen.”<sup>197</sup> As of July 25, 2024, the 30-second ad has been viewed 8.6 million times  
 12 on YouTube.

13 349. The 15-second ad similarly states, “For a cleaner, more sustainable future,  
 14 America’s Plastic Makers are investing billions of dollars to create innovate products and new  
 15 recycling technologies. Because when you push for smarter solutions, big things can happen.” As  
 16 of July 25, 2024, the 15-second ad has been viewed almost 35 million times on YouTube.

17 350. Contrary to the ad’s misleading claims, plastic cannot be “remade over and  
 18 over,” especially not through ExxonMobil’s “advanced recycling” technology. As noted above,  
 19 ExxonMobil’s “advanced recycling” technology is not “new” and destroys most of the plastic  
 20 waste it co-processes. Like the ad campaign by the Council for Solid Waste Solution that placed  
 21 deceptive ads in newspapers and magazines in the 1980s, this modern-day ad campaign by  
 22 America’s Plastic Makers, with ExxonMobil at the helm, deceptively seeks to convince  
 23 consumers that recycling, especially “advanced recycling,” will save the day in order to continue

24 <sup>195</sup> ExxonMobil also gave the American Chemistry Council an additional \$4 million in  
 25 2022 for the following “deliverable”: “Targeted campaign for CA ballot initiative.” This was  
 likely referring to the 2022 grassroots ballot initiative in California that sought to create a plastics  
 extended producer responsibility program in the state.

26 <sup>196</sup> Samuelson, *The Plastic Industry’s \$30 Million Lie*, HEATED (July 25, 2024)  
 27 <[https://heated.world/p/the-plastic-industrys-30-million?utm\\_campaign=email-half-](https://heated.world/p/the-plastic-industrys-30-million?utm_campaign=email-half-post&r=27dq5&utm_source=substack&utm_medium=email)  
[post&r=27dq5&utm\\_source=substack&utm\\_medium=email](https://heated.world/p/the-plastic-industrys-30-million?utm_campaign=email-half-post&r=27dq5&utm_source=substack&utm_medium=email)> (as of July 29, 2024).

28 <sup>197</sup> America’s Plastic Makers, *Dominoes (30s)* (Feb. 22, 2024) YouTube  
 <<https://www.youtube.com/watch?v=rewRKYIRew4&t=30s>> (as of July 29, 2024).

1 saturating the public and the planet with single-use plastic.

2 **IV. EXXONMOBIL'S DECEPTIONS ABOUT PLASTIC RECYCLING CAUSED AND ARE**  
 3 **CAUSING FORESEEABLE HARM TO CALIFORNIA'S NATURAL RESOURCES,**  
 4 **ECONOMY, AND RECREATION, AND ARE RESULTING IN ENVIRONMENTAL**  
 5 **INJUSTICE.**

6 351. ExxonMobil, independently and through its agents, servants, alter-egos and  
 7 industry groups, has misled consumers, policymakers, and regulators about the viability of plastic  
 8 recycling as a solution for plastic waste for more than 50 years. Since the early 1970s, as alleged  
 9 above, ExxonMobil has publicly promoted the lie that recycling would be the solution to the  
 10 plastic waste problem created by its products, while knowing that it would not. At the same time,  
 11 ExxonMobil has expanded its plastic production, which has foreseeably led to a plastic waste and  
 12 pollution crisis across California.

13 352. ExxonMobil marketed plastics and recycling in a manner that directly and  
 14 foreseeably impacted and continues to impact California, with knowledge that the intended use of  
 15 its products harmed and will continue to harm California and elsewhere. ExxonMobil  
 16 purposefully directed its misleading conduct to reach the State, its businesses, and its residents, to  
 17 promote the continued and unabated use of plastics products, including ExxonMobil's plastics  
 18 products, in California and elsewhere. These deceptions have resulted in significant injuries in the  
 19 State while increasing sales to ExxonMobil.

20 353. Over the years, ExxonMobil expanded its U.S. plastic production to 7.7 million  
 21 tonnes per year in 2023. Plastic waste has also grown, for instance, from 8.9 percent of all  
 22 managed trash in California in 1999 to almost 14 percent of all managed trash in California in  
 23 2021. Yet, throughout the half century during which ExxonMobil promised that recycling would  
 24 provide the solution to the increasing amount of plastic waste generated by its ever increasing  
 25 plastic production, the rate of plastic recycling in the United States has never exceeded nine  
 26 percent (and only reached nine percent due to millions of pounds of plastic waste exported each  
 27 year under the guise of recycling), and currently hovers at around five percent.<sup>198</sup>

28 <sup>198</sup> Nat. Renewable Energy Laboratory, *NREL Calculates Lost Value of Landfilled Plastic in U.S., supra*; see also Beyond Plastics, *The Real Truth About the U.S. Plastics Recycling Rate, supra*, at page 2.

354. Meanwhile, the public became alarmed by the increasing amount of plastic trash that had begun choking California rivers and shores. In response to Californians' desperation to do something about plastic waste destroying the environment, California Coastal Cleanup Day was born. Volunteers concerned with the devastating effects of plastic pollution on California beaches, waterways, and wildlife have collected and categorized over 65 items of mostly single-use plastic waste on a single day annually from 1988 to present.

355. Since 1985, more than 1.7 million volunteers have removed over 26 million pounds of trash from beaches and inland waterways across California. ExxonMobil's polymer products are used to make the plastic items within the top 10 items collected on California Coastal Cleanup Day. These single-use plastic items found on California beaches are made, in part, from polymers and plastics produced by ExxonMobil and manufactured by ExxonMobil's customer brands. (See Figure C above).

**Figure I: Surfrider Foundation Report of Top Beach Cleanup Items in 2023**

Surfrider's 2023 Assessment of 685 Beach Cleanups in the United States



356. Studies dating from at least 10 years ago show that plastic accounts for approximately 90 percent of all floating marine debris.

357. ExxonMobil externalized the cost of addressing plastic waste and pollution onto the State, its People, and its ecosystems by expanding its plastic production without regard for the end-life of its product, including the impact of plastic waste and the inability of plastic recycling to meaningfully address the massive amount of plastic waste produced. ExxonMobil's contribution to the plastic waste and pollution crisis through its deceptive messages caused and

continues to cause the State substantial harm. The plastic ExxonMobil produces foreseeably becomes plastic waste and pollution that impairs California’s public trust resources, including its tidelands, beaches, oceans, and all of the wildlife dependent upon these and other waterbodies and impedes the public’s enjoyment of and ability to recreate in these natural environments.

358. In addition to these harms, plastic pollution also results in concrete economic costs borne by public entities and taxpayers in California.

359. As explained above, there is a direct relationship between the rise in plastic production and the rise in plastic pollution in that “a 1% increase in production, result[s] in approximately a 1% increase in branded plastic pollution.”<sup>199</sup>

**A. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Harms California’s Natural and Public Trust Resources.**

360. Plastic pollution is pervasive in California. It is found throughout the state, including in the state’s rivers, lakes, bays, and ocean waters. Plastic is even found in protected coastal areas, such as the Monterey Bay National Marine Sanctuary and the Bodega Bay State Marine Reserve. California has 105 water bodies that contain so much debris and plastic that they are either already listed as having “impaired” water quality under the Clean Water Act or have been recommended for such a listing in the State Water Resources Control Board’s 2024 Integrated Report (pending approval by U.S. EPA), which identifies impaired water bodies. Plastic pollution in the state’s public trust lands impairs public trust resources and injures the public’s right and ability to freely use them.

361. California’s coastal public trust lands support a variety of ecological, socioeconomic, and cultural functions. Coastal wetlands and beaches support biodiversity and perform a variety of important ecosystem services, like buffering wave energy, filtering water, recycling nutrients, and serving as nursery habitat for fish species that are part of larger coastal ecosystems. All of these essential biological functions have been harmed by plastic waste and pollution that ExxonMobil has substantially caused, resulting in harm to the State’s ecosystems

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<sup>199</sup> Cowger et al., *Global responsibility for plastic pollution*, 10 Science Advances 7 (Apr. 24, 2024).

1 and wildlife. Extensive research shows that exposure to plastic pollution has had substantial  
2 negative impacts on a wide range of freshwater, marine, and terrestrial species.

3 362. Plastic food packaging has been found in dead seabird stomachs in San Diego  
4 and Monterey since the 1970s. As plastic production has ramped up, California's wildlife  
5 increasingly suffers from plastic ingestion and entanglement.<sup>200</sup> Wildlife frequently mistakes  
6 plastic for food or inadvertently swallows plastic while feeding or swimming.<sup>201</sup> Ingesting plastic  
7 can obstruct digestion and lacerate intestines, which interferes with an animal's ability to feed and  
8 obtain nourishment.<sup>202</sup> Wildlife also become entangled in plastic, causing animals to drown,  
9 choke, or suffer physical trauma, such as amputation and infection, which interferes with feeding  
10 and foraging, leading to malnutrition and unnecessary death.<sup>203</sup>

11 363. The National Oceanic and Atmospheric Administration (NOAA) and the  
12 National Marine Fisheries Service (NMFS) reported that, in the last two decades, a total of 1,114  
13 marine mammals in California were entangled in plastic or plastic was found in the animal's  
14 stomach.<sup>204</sup> Some examples of marine life entanglement in California include a report that a long-  
15 beaked common dolphin was found with a food wrapper lodged in its esophagus, a northern  
16 elephant seal nursing its pup was found with a packing strap around its neck, and a leatherback  
17 sea turtle was found with plastic sheeting stuck in its gastrointestinal track. A separate study of  
18 stranded marine mammals on the central California coast between 2003 and 2015 showed marine  
19 debris entanglement was the main trauma category affecting pinnipeds, including California sea

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21 <sup>200</sup> Donnelly-Greenan et al., Moss Landing Marine Laboratories, Entangled  
22 Seabird and Marine Mammal Reports from Citizen Science Surveys from Coastal  
23 California (1997–2017), 149 Marine Pollution Bulletin (Aug. 28, 2019) (study in central CA from  
24 1997-2017 finding seabirds entangled in CA primarily from fishing lines; mostly in Monterey  
25 Bay NMS).

26 <sup>201</sup> Warner et al., *Oceana, Choked, Strangled, Drowned: The Plastics Crisis Unfolding in*  
27 *Our Oceans* (Nov. 2020).

28 <sup>202</sup> *Ibid.*

<sup>203</sup> *Ibid.*

<sup>204</sup> Fong, *California: Marine Mammals Tangled and Intoxicated by Plastic*, Internat.  
Marine Mammal Project (Aug. 20, 2020) <<https://savedolphins.eii.org/news/california-marine-mammals-tangled-and-intoxicated-by-plastic#:~:text=In%20the%20last%20two%20decades,was%20found%20in%20its%20stomach>>  
(as of July 29, 2024).

lions, elephant seals, and Guadalupe fur seals.<sup>205</sup>

364. California's wildlife is being directly harmed by ExxonMobil's plastic marine debris. Between 2008 and 2012, NOAA reports that marine debris off the coast of California seriously injured or killed 65 Californian sea lions, seven northern elephant seals, three sperm whales, two California harbor seals, and one long-beaked common dolphin.<sup>206</sup> In 2016, the Secretariat of the Convention on Biodiversity reported that marine debris entanglements had been documented for 519 species of animals, including 46 percent of all species of marine mammals.<sup>207</sup> Numerous studies show that plastic accounts for approximately 90 percent of all floating marine debris. ExxonMobil's plastic is killing California's marine life.

365. Marine debris also plagues birds in California. A study of six California counties showed seabirds accounted for 97 percent of all debris entanglement deaths from 1997 to 2017. The most affected species were the common murre, accounting for 23 percent of deaths, Brandt's Cormorant, accounting for 13 percent, followed by the Western Gull (9.6 percent), Sooty Shearwater (8 percent), and Brown Pelican (7 percent).

366. Marine debris also poses harms to California birds through ingestion. Birds that call California home, such as California condors, red-tailed hawks, red-shouldered hawks, great horned owls, and barn owls are known to ingest plastic pollution, some species mistaking it for food.<sup>208</sup> A study of California condor mortality, from 1992 through 2009, revealed that trash ingestion was the leading cause of death in nestlings, accounting for 73 percent of nestling deaths. Plastic pollution is so prevalent in bird stomachs, researchers have coined the term "plasticosis" to describe stomach damage related to ingesting plastic trash. As a consequence of plastic ingestion, a variety of bird species can suffer from nutritional deprivation, damage or obstruction

<sup>205</sup> Barcenas-De La Ceuz et al., *Evidence of Anthropogenic Trauma in Marine Mammals Stranded Along the Central California coast, 2003-2015*, 34 *Marine Mammal Science* 2 (Oct. 23, 2017).

<sup>206</sup> Carretta et al., *Nat. Oceanic and Atmospheric Admin., U.S. Pacific Marine Mammal Stock Assessments: 2018* (June 2019).

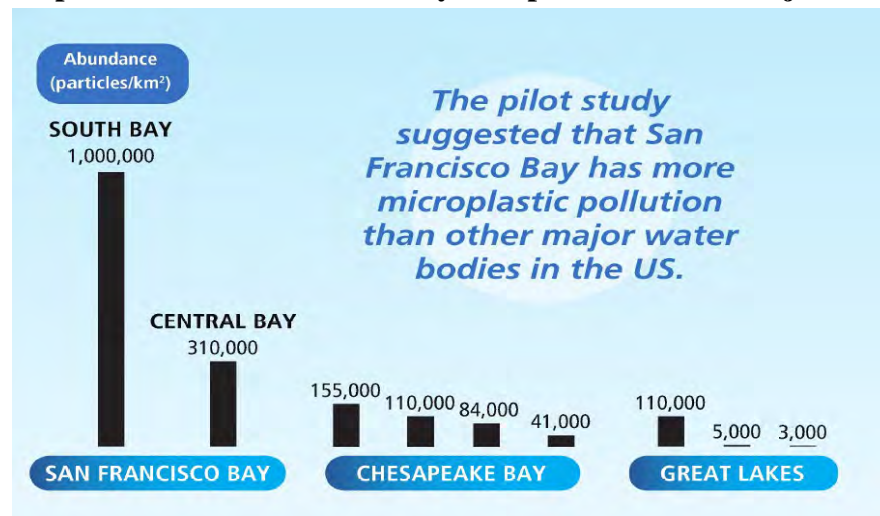
<sup>207</sup> Secretariat of the Convention on Biological Diversity, *Marine Debris: Understanding, Preventing and Mitigating the Significant Adverse Impacts on Marine and Coastal Biodiversity* (Technical Series No. 83) (2016) page 18.

<sup>208</sup> Leviner, et al., *Documentation of Microplastics in the Gastrointestinal Tracts of Terrestrial Raptors in Central California, USA*, 109 *California Fish and Wildlife Scientific Journal* 6 (July 10, 2023).

of the gut, and inflammatory responses, leading to reduced food intake, delayed ovulation, and increased mortality. A 2015 study revealed that ingestion or entanglement records for marine bird species had increased from 44 percent to 56 percent since the 1990s, as had the proportions of marine mammal, sea turtle, and marine fish species.<sup>209</sup> The increases in wildlife entanglement and ingestion of plastic coincides with the increase in ExxonMobil's production of plastic since the 1990s.

367. As plastic continues to degrade in the environment, it breaks down into smaller and smaller fragments, eventually becoming what is commonly referred to as "microplastics." Microplastics contaminate every level of the food web in California, and both plastic fragments and the chemicals they carry can bioaccumulate in the food web at multiple trophic levels. A recent study found that surface water "levels of microparticles in the [San Francisco] Bay were some of the highest observed globally," and that "microplastic contamination, a global concern, may be higher in San Francisco Bay than in other urban areas in North America."<sup>210</sup> And a 2019 study found that "between 4.7 and 7.2 trillion microplastics enter San Francisco Bay via [] small tributaries annually."<sup>211</sup>

**Figure J: Microplastics in San Francisco Bay Compared to Other Major U.S. Water Bodies**



<sup>209</sup> Good et al., *Plastics in the Pacific: Assessing Risk from Ocean Debris for Marine Birds in the California Current Large Marine Ecosystem*, 250 Biological Conservation 108743 (Oct. 2020).

<sup>210</sup> S.F. Estuary Institute and The 5 Gyres Inst., Executive Summary, San Francisco Bay Microplastics Project (2019).

<sup>211</sup> Sutton et al. Understanding Microplastic Levels, Pathways, and Transport in the San Francisco Bay Region. San Francisco Estuary Institute page 49.

1           368.       Exposure to plastic pollution and microplastics negatively impacts California's  
2 aquatic plants and wildlife. Studies show that microplastic exposure reduces root growth in  
3 aquatic plants native to California, decreases energy reserves in bivalves (mollusks), decreases  
4 juvenile growth rates in snails native to California, and can cause injury and inflammatory  
5 responses in zooplankton. Other studies show that mussel species had strong inflammatory  
6 responses when exposed to microplastic. Research suggests that the allocation of energy to  
7 immune responses may have detrimental effects to an organism's health over time. Two studies  
8 on Pacific oysters, also found in California, found that microplastic exposure and ingestion  
9 affected their physiology, behavior, and negatively affected oyster reproduction. Further, a study  
10 of San Francisco Bay found that microplastics pose a statistically significant risk to the health of  
11 aquatic ecosystems.<sup>212</sup>

12           369.       ExxonMobil has produced highly-refined white oils for polystyrene production  
13 for over a century and is a major producer of styrene copolymers. A study of polystyrene plastic  
14 found that plastic particles adhere to primary producers (phytoplankton and algae, which form the  
15 basis of the marine food chain) and that plastic is then found in the digestive organs of higher  
16 trophic species (i.e., in species that eat primary producers). A study of the remote Bodega Marine  
17 Reserve on California's coast found that the organisms sampled had "remarkably higher  
18 concentrations of microplastic particles than the environmental samples" (i.e., seawater), and that  
19 microplastic density increased with trophic level (position up the food chain). Similarly, a study  
20 of Monterey Bay, California, revealed that 58 percent of anchovy fish studied contained  
21 microplastics, while 100 percent of common murrelets studied, a predator of anchovy, contained  
22 microplastics.

23           370.       Other studies document that California's wildlife is ingesting microplastics. It  
24 was recently discovered that endangered blue whales, humpback whales, and fin whales off  
25 California's coast ingest far more plastic than previously understood. A blue whale may ingest 10  
26

27 \_\_\_\_\_  
28 <sup>212</sup> Coffin et al., *Risk Characterization of Microplastics in San Francisco Bay, California*,  
2 Microplastics and Nanoplastics 19 (July 7, 2022).

1 million pieces of microplastic in a single day.<sup>213</sup> illustrating the massive presence of plastic in the  
2 environment.

3 371. In an extensive review of scientific literature, a 2021 study by Dr. Matthew S.  
4 Savoca et al. at the Hopkins Marine Station of Stanford University found that 386 marine fish  
5 species are known to have ingested plastic debris, including 210 commercially important species.  
6 The research reveals that the consumption of plastic by fish is widespread and increasing, and that  
7 the 210 commercial species that were found to have ingested plastic is likely an underestimate.  
8 Over the last decade, the rate of plastic consumption by fish has doubled, increasing by 2.4  
9 percent every year. The Savoca study showed that new species of fish were discovered with  
10 plastic inside of them each year.

11 372. The evidence showing that plastic harms California wildlife is overwhelming.  
12 ExxonMobil's rampant plastic production, brought about by its decades-long campaign of  
13 deception regarding the recyclability of plastic, has substantially caused and is causing  
14 foreseeable harm to California's wildlife. The estimated cost of plastic degradation to the marine  
15 environment is \$33,000 per tonne of plastic waste,<sup>214</sup> though the true economic cost is likely to be  
16 greater. The State, its People, and its ecosystems, bear this cost. The plastic crisis that kills and  
17 injures California's wildlife is offensive and indecent, and any reasonable person would be  
18 annoyed or disturbed.

19 **B. Plastic Waste and Pollution Substantially Caused by ExxonMobil Harm**  
20 **the Public's Ability to Enjoy and Recreate in California.**

21 373. Plastic pollution of California's environment significantly interferes with the  
22 public's enjoyment and use of California's public spaces. Plastic waste and pollution negatively  
23 impact the recreational and aesthetic value of California's beaches, coastlines, environments,  
24 parks, lakes, rivers, and other waterways, and is costly to remove.

25 374. The presence of plastic litter and microplastics adversely affects the quality of

26 \_\_\_\_\_  
27 <sup>213</sup> Kahane-Rapport et al., *Field Measurements Reveal Exposure Risk to Microplastic*  
*Ingestion By Filter-Feeding Megafauna*, 13 Nature Communication 6327 (Nov. 1, 2022).

28 <sup>214</sup> Coffee et al., UCLA Luskin Ctr. for Innovation, *Plastic Waste in Los Angeles County: Impacts, Recyclability, and the Potential for Alternatives in the Food Service Sector* (Jan. 2020).

1 fresh and saltwater bodies of water in California and causes inconvenience and annoyance to any  
2 reasonable person. The condition affects a substantial number of people who use California  
3 waterways for commercial and recreational purposes and interferes with the rights of the public at  
4 large to a clean and safe environment.

5 375. The various beaches and wetlands that constitute public tidelands support public  
6 access and coastal recreational activities like surfing, sunbathing, swimming, birdwatching, and  
7 fishing. The Coastal Act mandates that California provide maximum access and recreational  
8 opportunities to the public and protect, encourage, and provide lower-cost visitor and recreational  
9 opportunities in the interest of environmental justice.

10 376. Plastic pollution is also damaging public spaces in California. For decades,  
11 single-use plastic waste has fouled California's beaches. Since 1985, the California Coastal  
12 Commission has organized its annual Coastal Cleanup Day to address litter in California. Since  
13 its inception, the Cleanup Day has collected over 26 million pounds of beach debris,  
14 approximately 81 percent of which is plastic. Since 1988, plastic waste, including cigarette filters,  
15 food wrappers, bags, and bottles have consistently ranked in the top 10 items found on  
16 California's beaches during the annual Cleanup Day.

17 377. Plastic pollution in the marine environment negatively impacts recreational  
18 activity in California. Plastic pollution creates a visual and aesthetic problem that impacts local  
19 tourism. Litter on beaches and coastlines discourages tourism—in fact, litter is often cited as a  
20 primary reason why tourists spend less time at or avoid certain locales. Beach visitors are likely to  
21 be concerned about marine debris because it poses potential physical harms from lacerations,  
22 bacterial infections, or entanglements during swimming, and because it detracts from the  
23 perceived natural beauty of an area.

24 378. A NOAA study found that Orange County residents avoided going to littered  
25 beaches and spent millions of dollars annually driving to cleaner beaches.<sup>215</sup> The study concluded  
26 that reducing marine debris by 50 percent would lead to a \$67 million benefit to Orange County

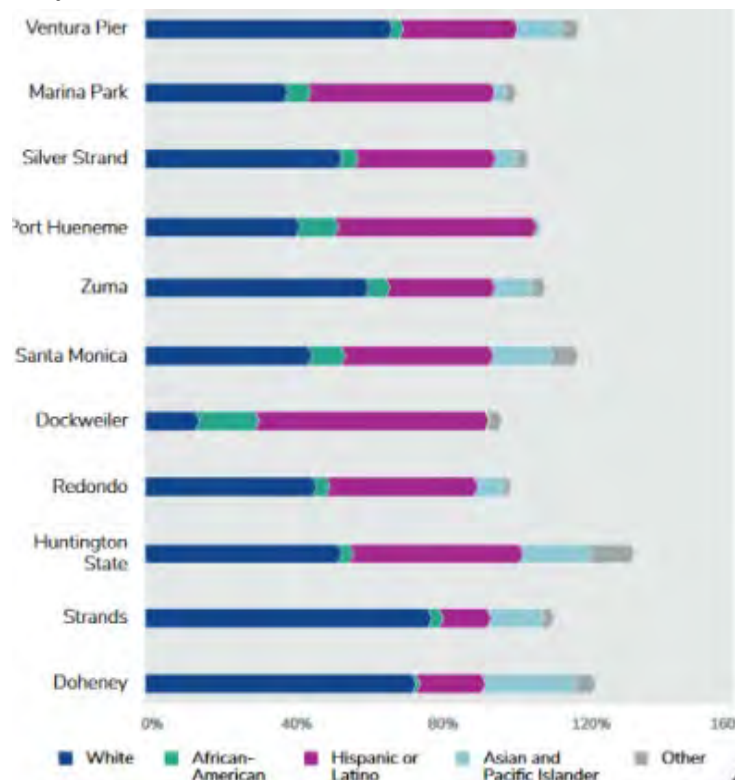
27 <sup>215</sup> Leggett et al., Industrial Economics, Inc. (prepared for Marine Debris Div., Nat.  
28 Oceanic and Atmospheric Admin.), Assessing the Economic Benefits of Reductions in Marine  
Debris-A Pilot Study of Beach Recreation in Orange County, California (June 15, 2014).

residents over a three-month period. Given the enormous popularity of California beaches, the magnitude of recreational losses associated with plastic debris is substantial.<sup>216</sup>

**C. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Disproportionately Affects California's Communities of Color and Low-Income Populations.**

379. Plastic beach pollution also disproportionately affects Black and Latinx residents in California. A UCLA study found that Dockweiler State Beach was the most popular Southern California beach for Black and Latinx visitors. See Figure K, below. Dockweiler State Beach had the fewest white visitors, and had the poorest visitors of all surveyed beaches, with most visitors' household income being below \$50,000 per year.<sup>217</sup> A separate federal study found that Dockweiler had the most trash density—primarily plastic waste—out of every Southern California beach surveyed.<sup>218</sup>

**Figure K: Ethnicity of Southern California Beach Visitors**



<sup>216</sup> Stickel, et al., Kier Associates (prepared for U.S. Environmental Protection Agency), The Cost to West Coast Communities of Dealing with Trash, Reducing Marine Debris (Sep. 2012) (west coast spends \$520 million per year to clean up pollution on coast).

<sup>217</sup> Christensen et al., UCLA Coastal Access Report Southern California Supplement (Jan. 25, 2017).

<sup>218</sup> Leggett et al., Assessing the Economic Benefits of Reductions in Marine Debris: A Pilot Study of Beach Recreation in Orange County, California, *supra*, at page 17.

1           380.       Plastic pollution in California also disproportionately harms subsistence fishing.  
2       Chemicals in marine plastic pollution may be ingested by fish, as well as adsorbed onto the  
3       plastic which is then ingested and bioaccumulated in fish. Smaller microplastics can be caught in  
4       the tissues of the gills, and the simple action of consuming plastic reduces the fish's capacity to  
5       ingest nutritious food and therefore lowers the nutritional and reproductive value of the fish.

6           381.       Because plastics disintegrate into infinitesimally small pieces in our waterways,  
7       they are ingested by filter-feeding organisms and thus have entered all links of the marine food  
8       chain. Californians who consume fish and other seafood, including those who fish for  
9       subsistence, thus also consume microplastics.

10          382.       Sea Grant-funded research has examined the demographics of anglers from San  
11       Diego Bay, San Francisco Bay, and Central Valley waterbodies. Based on 2015 Census tracts,  
12       almost all pier anglers reported under the 200 percent poverty level, defined as a household of  
13       four with a total annual income of less than \$50,000, with many under the 100 percent poverty  
14       level (less than \$25,000).

15          383.       The Sea Grant study shows only about 10 percent of pier and shore-based  
16       anglers had a college degree, and many never finished high school. By comparison, 50 to 75  
17       percent of private and charter boat-based anglers were college educated and had an annual  
18       income greater than \$50,000 per year. California pier anglers were predominantly Asian, with  
19       Hispanic and Black anglers present in lower yet substantial proportions. White anglers were the  
20       smallest demographic of pier anglers and the largest demographic of boat-based anglers.

21          384.       Sea Grant researchers also found that California pier anglers consume more of  
22       their catch than private boat, charter boat, and other shoreline anglers combined. The more times  
23       an angler fished per week, the higher their consumption rate.

24          385.       Based on this data, the majority of California pier anglers are people of color  
25       without a college degree from low-income communities who often eat what they catch. Locally  
26       caught fish as the primary protein in a diet is inexpensive but has other costs—higher levels of  
27       fish consumption mean higher levels of plastic pollution consumed.

28          386.       Consumption of sport fish is an important food source for Californians.

1 Approximately 33 percent of recreational and subsistence anglers in Los Angeles County  
2 consume their catches.

3 387. In California, there have for decades been coastal advisories aimed at limiting  
4 consumption of nearshore saltwater fish, such as White Croaker (*Genyonemus lineatus*), because  
5 of environmental contamination bio-accumulating in their bodies. Microplastic bioaccumulation  
6 in fish only stands to exacerbate concern about human consumption of these species.

7 388. The prevalence of plastic pollution in the marine food chain causes concerning  
8 risks for Californians who depend on the ocean for food, such as subsistence anglers, and also for  
9 recreational anglers. Furthermore, the relentless influx of plastic polluting vital food sources  
10 exacerbates the disparities faced by Black, Latinx, and other Californian people of color,  
11 particularly those with lower incomes who rely on these resources for sustenance.

12 389. ExxonMobil's substantial creation of the plastic waste and pollution crisis  
13 through its deception about plastic's recyclability has caused the State enormous harm. Residents  
14 cannot enjoy California's beaches, oceans, and other natural and public trust resources, including  
15 fish, to their full extent because of plastic pollution.

16 **D. ExxonMobil Substantially Caused and Is Causing Plastic Waste and**  
17 **Pollution That Harm California's Local Coastal Economies.**

18 390. Plastic pollution of California's environment has a range of economic costs to  
19 California, including loss of tourism and tax revenue for communities. Plastic waste and pollution  
20 also interfere with California's commercial and recreational fishing and boat navigation.

21 391. Additionally, plastic waste and pollution negatively impacts fish populations  
22 that California's fishing economy depends upon. Marine plastic pollution not only reduces the  
23 efficiency and productivity of commercial fisheries and aquaculture through physical  
24 entanglement and damage but also poses a direct risk to fish and shellfish stocks. A wide range of  
25 marine species, including those commonly consumed by humans, ingest plastic pollution directly  
26 or indirectly by ingesting plastic-contaminated prey. Plastic contamination in the food chain  
27 harms, sometimes lethally, fish and shellfish stocks, which impacts the productivity and  
28 profitability of California's fishing and aquaculture industries. Studies have shown that 25 percent

of California's commercial fish supply is contaminated with anthropogenic debris.<sup>219</sup> Another study shows that 25 percent of fish from a creek that flows into San Diego Bay contain microplastics.<sup>220</sup>

**E. ExxonMobil Substantially Caused and Is Causing Plastic Waste and Pollution That Results in Significant Economic Harm to California Taxpayers and Public Entities.**

392. Plastic pollution of California's environment has caused and continues to cause direct economic harm to public entities and taxpayers in California. The costs of managing and cleaning up plastic waste are largely borne by residents and taxpayers via municipal governments. Those costs have grown over the past three decades, as explained in more detail in the following paragraphs.

393. Through its deception about the capacity of recycling to solve the plastic waste and pollution crisis, ExxonMobil worked to avoid any limitations on or pressures on its business model. California's state and municipal governments and California residents/taxpayers bear the tangible and quantifiable costs of ExxonMobil's campaign of deception.

**1. Costs for collecting, hauling, and disposing of plastic waste.**

394. California households pay for the collection, hauling, and disposal of plastic waste. Over the past three decades, the amount of plastic waste has skyrocketed due to ExxonMobil's expansion of its plastic production, which, coupled with ExxonMobil's decades-long campaign of deception around recycling, has foreseeably led to store shelves flooded with products in plastic packaging and a plastic waste and pollution crisis. Since plastic recycling is not economically viable at scale, consumers have been forced to pay for disposal of more plastic waste. At the same time, the cost of waste disposal has also increased.<sup>221</sup>

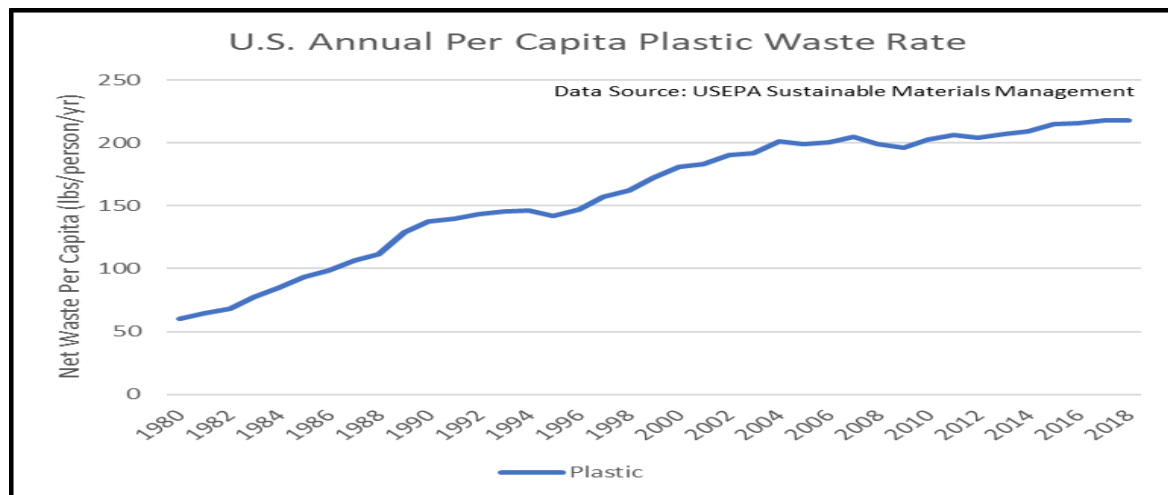
<sup>219</sup> Rochman et al., *Anthropogenic Debris in Seafood: Plastic Debris and Fibers from Textiles in Fish and Bivalves Sold for Human Consumption*, 5 *Scientific Reports* 14340 (Sep. 24, 2015).

<sup>220</sup> Talley et al., *Natural History Matters: Plastics in Estuarine Fish and Sediments at the Mouth of an Urban Watershed*, *PLOS One* (Mar. 18, 2020).

<sup>221</sup> Global Disposal, [Rising Waste Disposal and Recycling Costs for California Communities: What You Should Know](https://www.globaldisposal.com/blog/rising-waste-disposal-and-recycling-costs-for-california-communities-what-you-should-know) (Oct. 21, 2022) <<https://www.globaldisposal.com/blog/rising-waste-disposal-and-recycling-costs-for-california-communities-what-you-should-know>> (as of July 29, 2024).

395. The U.S. Environmental Protection Agency (USEPA) published plastic waste data at the national level from 1960 through 2018.<sup>222</sup> Figure L, below, shows that the national average per capita plastic waste generation rate increased from 60 pounds per person per year in 1980 to 137.3 pounds per person per year in 1990 to 218.3 pounds per person per year in 2018.

**Figure L: United States Annual Per Capita Plastic Waste Rate**



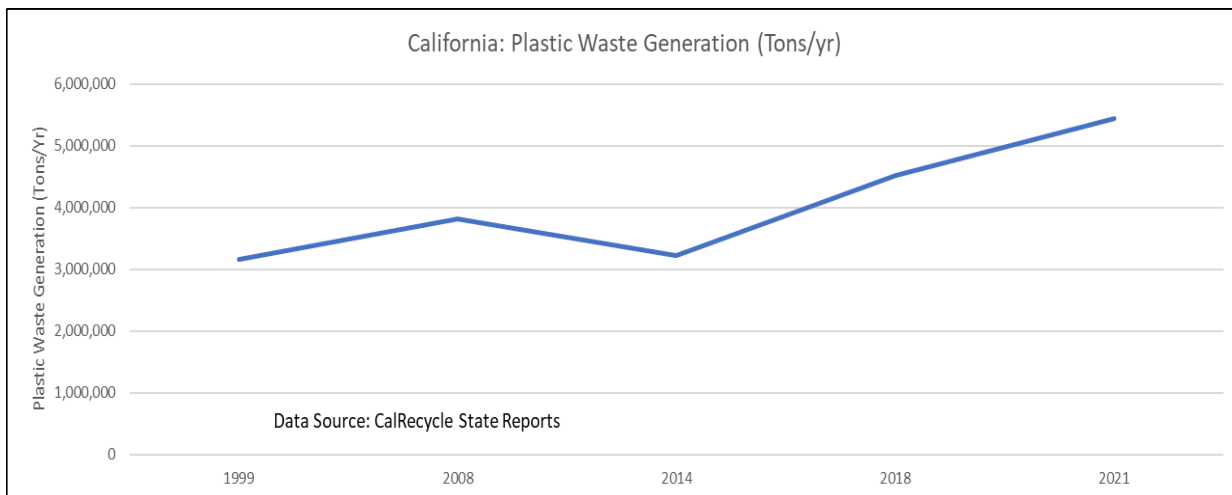
396. CalRecycle has published waste characterization reports since 1999. Figures L and M, below, summarize the plastic waste data included in CalRecycle's reports for 1999, 2008, 2014, and 2021. Using California's population data over that period, plastic waste generation per capita grew approximately from 190.78 pounds per person per year in 1999 to 278.21 pounds per person per year in 2021.

**Figure M: Summary of CalRecycle Waste Characterization Data**

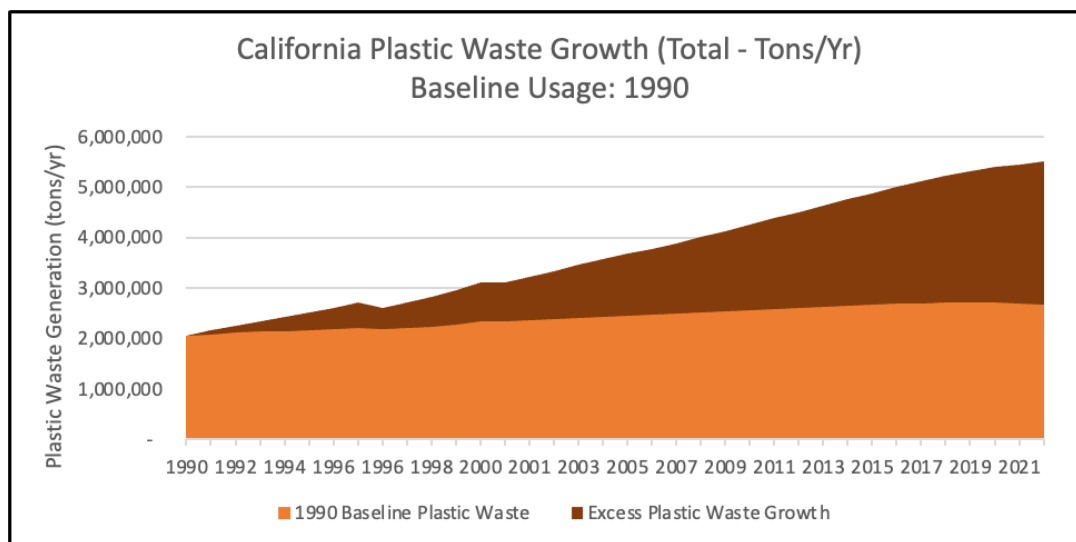
CA Waste Characterization	1999	2008	2014	2018	2021
Percent plastic	8.9%	9.6%	10.4%	11.5%	13.7%
Total Plastic Waste (U.S. tons)	3,161,777	3,807,952	3,215,943	4,524,052	5,445,299
Population <sup>223</sup>	33,145,121	36,604,337	38,586,706	39,437,463	39,145,060
Per capita (Pounds/person/year)	190.78	208.06	166.69	229.43	278.21

<sup>222</sup> U.S. Environmental Protection Agency, Studies, Summary Tables, and Data Related to the Advancing Sustainable Materials Management Report.

<sup>223</sup> MacroTrends, California Population 1900-2023 <[https://www.macrotrends.net/global-metrics/states/california/population#google\\_vignette](https://www.macrotrends.net/global-metrics/states/california/population#google_vignette)> (as of July 29, 2024).

**Figure N: Summary of CalRecycle Waste Characterization Data**

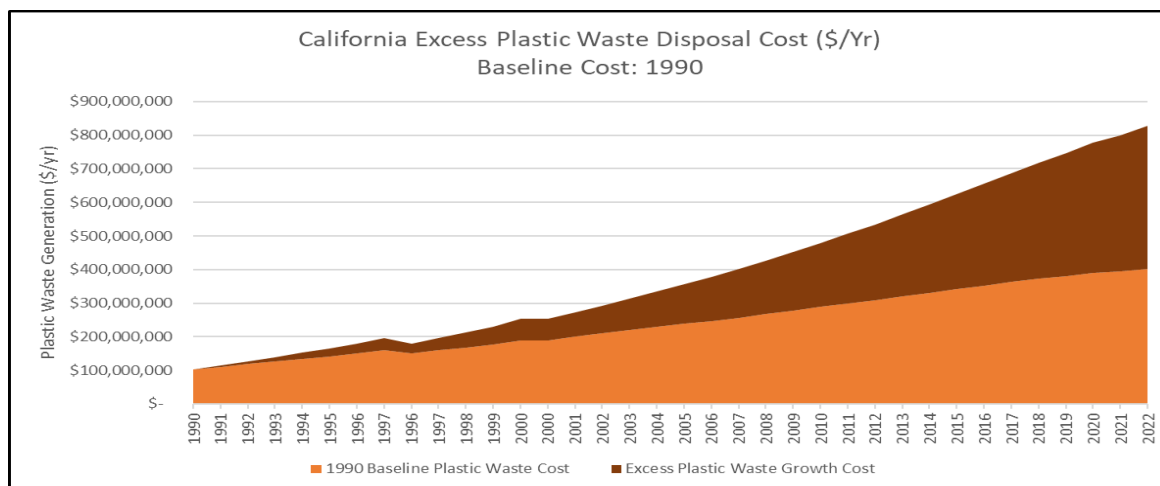
397. As discussed above, ExxonMobil, independently and through its involvement in plastics industry and front groups, has misled consumers, policymakers, and regulators about the ability of plastic recycling to handle the massive volume of plastic waste since the 1980s, which led to a glut of plastic waste. Figure O, below, the growth in excess plastic waste over the 1990 baseline, shows that between 1990 and 2022, about 47 million tons of excess plastic waste was generated in California.<sup>224</sup>

**Figure O: California Excess Plastic Waste Growth (1990 to 2022)**

<sup>224</sup> This estimate is based on the U.S. EPA 1990 baseline of 137.3 pounds per person per year of plastic waste generation, the CalRecycle 2021 figure of 278.21 pounds per person per year of plastic waste generation, and California's population data. For the purpose of creating a credible, conservative cost estimate, a baseline year of 1990 was assumed for determining the "excess" plastic waste generated since ExxonMobil's plastic recycling campaign significantly increased at that time.

398. Figure P, below, shows the growth in cost to collect, haul, and dispose of California's plastic waste from 1990 to 2022.<sup>225</sup> Over that time, the per U.S. ton cost to collect, haul, and dispose of all waste has risen dramatically. This cost assumes that the average statewide cost to collect, haul, and dispose of waste in 1990 was \$50 per U.S. ton and has increased to \$150 per U.S. ton<sup>226</sup> in 2022, based on an increase in rate of 200% in waste management costs over that 32-year period. Based on this data and these assumptions, the cost to Californians to collect, haul, and dispose of excess plastic waste from 1990 through 2022 was \$5.5 billion dollars (without accounting for inflation).

**Figure P: California Excess Plastic Waste Disposal Cost**



## 2. Costs of plastic contamination in California's recycling system.

399. The increasing plastic waste resulting from ExxonMobil's increasing production of new plastic has also led to increased recycling costs for California. In 1989, the California State Legislature signed Assembly Bill (AB) 939 into law, which mandated every local jurisdiction in California to reduce their 1990 baseline waste by 25 percent by the year 1995, and by 50 percent by the year 2000. In 2011, AB 341 established a statewide goal that at least 75 percent of solid waste generated should be source-reduced, recycled, or composted by the year 2020. As a direct result of the 1989 legislation, cities in California were required to design and

<sup>225</sup> *Ibid.*

<sup>226</sup> See, e.g., City of Berkeley, Transfer Station <<https://berkeleyca.gov/city-services/trash-recycling/transfer-station>>; Del Norte County, Schedule B: Transfer Station Rates <<https://recycledelnorte.ca.gov/dist/docs/rates/dnco-rates.pdf>> (as of July 29, 2024).

1 implement curbside recycling programs that required mandatory participation by all residents.

2 400. Plastic contaminates the processing and sorting of post-consumer materials  
3 placed in curbside recycling bins and causes a significant and quantifiable cost. This  
4 contamination is the direct result of ExxonMobil's deceptive messages regarding plastic recycling  
5 and its promotion of false recyclable labels (such as the chasing arrows symbol, discussed above),  
6 which misled consumers to believe that the majority of plastics can be recycled. Based on this  
7 misconception, consumers put a wide range of plastics in the recycling bin. These plastics,  
8 particularly single-use plastics such as plastic bags and films, contaminate the waste stream with  
9 material that is not actually recyclable.<sup>227</sup> A 2019 survey showed that more than half of  
10 Californians mistakenly put plastic bags in recycling bins.<sup>228</sup>

11 401. A contaminated waste stream has economic costs: it increases collection and  
12 processing costs and damages sorting systems and equipment.<sup>229</sup> Energy, equipment, trucking,  
13 and labor costs and carbon emissions are wasted from collecting and sorting unwanted, worthless  
14 items through municipal sortation systems.<sup>230</sup> According to a survey by the industry publication  
15 Waste Dive, over 100 cities canceled their curbside recycling systems with contamination cited as  
16 a major contributing factor for closure.<sup>231</sup> Contamination harms the ability of sorting facilities to  
17 effectively sort other materials such as cardboard and paper that are easily ruined by contact with  
18 food-soiled packaging.<sup>232</sup> Collected curbside recycled materials are screened by material recovery  
19 facilities (MRF), waste sorting plants that separate and prepare single-stream recycling materials  
20 for sale to end buyers. If the screening reveals excessive contamination, the entire truckload may  
21 be sent to a landfill. This disrupts California's curbside recycling system, in that large volumes of

22 <sup>227</sup> Rachelson, *What is Recycling Contamination, and Why Does it Matter?* Rubicon  
23 (updated Feb. 6, 2023) <<https://www.rubicon.com/blog/recycling-contamination/>> (as of July 29, 2024).

24 <sup>228</sup> Tanimoto, The Recycling Partnership, 2019 West Coast Contamination Initiative  
Research Report (Apr. 2020).

25 <sup>229</sup> Oregon Truth in Labeling Task Force, Truth in Labeling Final Report and  
Recommendations (June 1, 2022).

26 <sup>230</sup> Rachelson, *What is Recycling Contamination, and Why Does it Matter?*, *supra*.

27 <sup>231</sup> Waste Dive, *Where Curbside Recycling Programs Have Stopped and Started in the US*  
(Dec. 18, 2019, updated Jan. 9, 2023) <<https://www.wastedive.com/news/curbside-recycling-cancellation-tracker/569250/>> (as of July 29, 2024).

28 <sup>232</sup> Marshall et al., *The Heavy Toll of Contamination*, Recycling Today (May 2017)  
<<https://www.recyclingtoday.com/article/the-heavy-toll-of-contamination/>> (as of July 29, 2024).

1 non-plastic recyclable materials (e.g., cardboard, metal, glass) do not get recycled.

2 402. Based on the available data and cost assumptions, the cost of plastic  
3 contamination from curbside bins over the 1990 to 2022 period is estimated to be \$15.7 billion in  
4 California (without accounting for inflation).

5 **3. Costs for worker injuries from plastic contamination in California's**  
6 **recycling system.**

7 403. Increased plastic contamination in California's recycling system threatens  
8 worker safety. In 2021, refuse and recyclable material collection was considered the seventh  
9 deadliest job in the country. According to data collected by the U.S. Department of Labor's  
10 Bureau of Labor Statistics in the Census of Fatal Occupational Injuries, refuse and recyclable  
11 material collectors had a fatal injury rate of 27.9 per 100,000 full-time equivalent workers.<sup>233</sup>  
12 Risks of injury and harm are increased when workers need to sort through increasingly  
13 contaminated loads and remove contaminants, such as plastic, from machinery.<sup>234</sup>

14 404. These increased costs are also the direct and foreseeable result of ExxonMobil's  
15 deceptive marketing to the public around the feasibility of plastic recycling to handle the massive  
16 amount of plastic waste generated. According to Susan Epps, a leading authority on MRFs safety,  
17 who participated in an investigation in 2019 by Waste Dive, "Any time someone puts an item in  
18 the recycling stream that's not accepted, it's usually someone else's job to take it out. Any time  
19 you touch material you have an opportunity to have an injury. And so, the number of  
20 opportunities in these facilities is great." "With fluctuating injury rates, and ongoing fatalities,  
21 MRFs remain a key safety challenge." In fact, these recycling facilities have been singled out by  
22 the Bureau of Labor and Standards for having some of the highest rates of days away, restricted  
23 or transferred (DART) among all occupations in the United States.

24 405. A July 2022 *CBS Morning News* segment also illustrates the dangers recycling  
25 workers face, as well as the increased risk of danger when unrecyclable products are placed in the  
26 recycling stream. In the video, a MRF worker explains the multiple harms caused by

27 <sup>233</sup> U.S. Dept. of Labor, National Census of Fatal Occupational Injuries 2021 (Dec. 16,  
28 2022).

<sup>234</sup> Rachelson, *What is Recycling Contamination, And Why Does it Matter?*, *supra*.

contamination of the recycling stream with flexible plastic packaging. He states that MRF workers must clean plastic waste from the equipment for two hours every day. The MRF worker states that flexible plastic film packaging can cause fires in MRFs. Plastic is highly flammable, and MRFs and plastic recycling facilities can operate with inadequate environmental protections. As shown by a massive fire at a plastic recycling and storage facility in Indiana in April 2023, significant health, social, and economic harms to communities can result from fires fueled by plastic waste.

**4. Plastic manufacturing plants and recycling centers disproportionately impact communities of color and low-income populations.**

406. Because of ExxonMobil's campaign of deception regarding the ability of plastic recycling to handle the massive amount of plastic waste generated, plastic waste and pollution has overrun the fragile system built to process it. MRFs and plastic manufacturing plants predominantly located in California's most vulnerable and already environmentally overburdened communities are causing an excess of truck impacts, odors, and injury.

407. MRFs and plastics manufacturing plants, which are necessitated by ExxonMobil's campaign of deception around the recyclability of plastic, are often sited in or near marginalized communities of color.<sup>235</sup> For example, plastic manufacturing plants and MRFs<sup>236</sup> are located in the most polluted neighborhoods in greater Los Angeles,<sup>237</sup> which are predominately Latinx and Black.<sup>238</sup> According to CalEnviroScreen 4.0,<sup>239</sup> Latinx populations experience the heaviest environmental burden in Los Angeles. The cities of Compton, Lynwood,

<sup>235</sup> U.S. Environmental Protection Agency, *National Overview: Facts and Figures on Materials, Wastes and Recycling*, *supra*.

<sup>236</sup> Leif, *EPA Leader Connects Recycling and Environmental Justice*, Resource Recycling (May 4, 2021) <[https://resource-recycling.com/recycling/2021/05/04/epa-leader-connects-recycling-and-environmental-justice/?utm\\_medium=email&utm\\_source=internal&utm\\_campaign=May+4+RR](https://resource-recycling.com/recycling/2021/05/04/epa-leader-connects-recycling-and-environmental-justice/?utm_medium=email&utm_source=internal&utm_campaign=May+4+RR)> (as of July 29, 2024).

<sup>237</sup> Cal. Office of Environmental Health and Hazard Assessment, CalEnviroScreen 4.0 <<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>> (as of July 29, 2024).

<sup>238</sup> *Ibid*; Best Neighborhood, *Race Map for Los Angeles, CA and Racial Diversity Data* <<https://bestneighborhood.org/race-in-los-angeles-county-ca/>> (as of July 29, 2024).

<sup>239</sup> CalEnviroScreen is a tool that measures environmental health in California communities; it functions as an internet mapping tool to analyze colocation of different environmental burdens.

1 and Carson, for example, have the highest pollution burden scores in CalEnviroScreen and are  
 2 predominantly made up of Latinx, Black, and Asian-American populations. Los Angeles County  
 3 has 28 MRFs, 14 of which are clustered along the corridors along the I-5, I-110, and I-710  
 4 freeways.

5 408. Proximity to MRFs is highly correlated with physical respiratory injury in  
 6 children and noxious odors in neighborhoods such as Oak View in Huntington Beach.<sup>240</sup> This  
 7 neighborhood is in the 93<sup>rd</sup> percentile for pollution burden and is 66 percent Latinx according to  
 8 the CalEnviroScreen 4.0 tool and recent census data.

9 409. Data shows that these plastic producing facilities and MRFs are located within  
 10 environmentally overburdened communities and communities of color. These communities also  
 11 bear the brunt of climate change impacts, which are exacerbated by greenhouse gas emissions  
 12 attributable to the production, transport, and disposal of plastic and plastic waste. Air emissions  
 13 (including greenhouse gases, odors, and toxic pollutants from plastics manufacturing facilities  
 14 and MRFs) will continue to disproportionately impact these overburdened communities as long as  
 15 Defendants' actions remain unchecked.

## 16 **5. Costs for plastic litter clean-up.**

17 410. California's local jurisdictions expend significant sums to clean up and prevent  
 18 plastic pollution from further damaging the environment (plastic comprises an estimated 80  
 19 percent of total litter). These clean-up costs include litter remediation efforts such as beach and  
 20 waterway clean-up, street sweeping, storm drain grate cleaning and maintenance, storm water  
 21 capture device installation, manual litter clean-up, and public re-education.

22 411. A 2013 Natural Resources Defense Council (NRDC) report concluded that  
 23 California local governments spend more than \$428 million annually to prevent litter, over 80  
 24

25 <sup>240</sup> The Rainbow MRF in Huntington Beach can be found on the Cal EnviroScreen  
 26 website here: <https://oehha.ca.gov/calenviroscreen>, using the SB 535 Disadvantaged  
 27 Communities overlay, and has been the subject of numerous news articles. See, e.g., Mellen,  
 28 *After Years of Complaints about Odor Pollution HB School District Settles Suit with Trash  
 Hauler*, Orange County Register (Nov. 17, 2016) <<https://www.ocregister.com/2016/11/17/after-years-of-complaints-about-odor-pollution-hb-school-district-settles-suit-with-trash-hauler/>> (as of  
 July 29, 2024) (as of July 29, 2024).

1 percent of which is plastic, from entering waterways.<sup>241</sup> Since 2013, the plastic waste and  
 2 pollution crisis in California has only intensified. New research suggests costs of litter  
 3 management to city governments have more than doubled over the last 10 years, and now stand at  
 4 approximately \$1 billion per year total across the state.

5 412. In order to confront the crisis of rising plastic waste and pollution, the State has  
 6 undertaken, and continues to undertake, complex and costly monitoring, research, regulatory,  
 7 mitigation, and remediation efforts. This essential work has caused the State and its taxpayers to  
 8 incur significant economic harm.

9 **6. Impacts to California's environment forces California to adopt**  
 10 **legislation and regulatory programs to combat the increased plastic**  
 11 **pollution caused by ExxonMobil's campaign of deception around**  
 12 **plastic recycling.**

13 413. ExxonMobil exacerbated the plastic crisis by overproducing virgin plastic while  
 14 misleading consumers to believe that recycling is a viable waste management strategy and renders  
 15 single-use plastic sustainable. As a result, the State has been forced to take necessary action to  
 16 combat plastic pollution and will be required to continue ramping up costly regulatory and  
 17 remedial activities in the future to address the plastics crisis substantially and proximately caused  
 18 by ExxonMobil's deception.

19 414. Implementing regulatory programs to address plastic waste and pollution—both  
 20 in the past, through the present, and increasingly over the future—requires a significant public  
 21 cost. This cost will increase as additional regulatory programs needed to fully address the plastic  
 22 waste and pollution crisis in California are implemented.

23 415. The California legislature has taken multiple approaches to reducing plastic  
 24 waste. California's legislature passed Senate Bill (SB) 54 (Allen, Chapter 75, Statutes of 2022) —  
 25 the Plastic Pollution Prevention and Packaging Producer Responsibility Act—and Senate Bill 343  
 26 (Allen, Chapter 507, Statutes of 2021), which restricts the use of recycling claims on products and

27 <sup>241</sup> Stickel et al., Kier Associates (prepared for Natural Resources Defense Council),  
 28 Waste in Our Water: The Annual Cost to California Communities of Reducing Litter That  
 Pollutes Our Waterways (Aug. 2013) page 19.

1 would prohibit the sale, distribution, or import of products with deceptive or misleading claims  
2 about recyclability.

3 416. In addition, Senate Bill 1335 (Allen, Chapter 610, Statutes of 2018) established  
4 the Sustainable Packaging for the State of California Act of 2018. Beginning January 1, 2021, a  
5 food service business on state property is prohibited from dispensing prepared, ready-to-eat food  
6 or beverages that are not packaged in a reusable, recyclable, or compostable manner.<sup>242</sup>

7 417. Trash, including mostly plastic debris, commonly pollutes State waters,  
8 transported by storm water, including through storm drains. The storm drains often convey water  
9 directly to water bodies, contributing to the expanded list of California's impaired water bodies.  
10 The presence of emerging contaminants, including microplastics in urban runoff, presents  
11 significant challenges for storm water capture and use or aquifer recharge through infiltration.

12 418. The State also bears the cost of addressing the plastic pollution on California's  
13 highway system infrastructure, which ExxonMobil substantially and proximately caused and  
14 continues to exacerbate. Roadway litter, most of which is plastic, clogs freeways and endangers  
15 travelers. Constant maintenance, expensive equipment, and costly public education campaigns are  
16 required to keep the highways and roads free of plastic pollution.

17 419. For example, costly capture devices are required to keep the highway system,  
18 an integral part of Californian infrastructure, functional and safe. Procurement and installation of  
19 these devices costs approximately \$150,000 to \$300,000 per acre of watershed. Current estimates  
20 show at least 22,000 acres will require capture devices to maintain highways statewide. It would  
21 require a minimum of *between \$3.3 to \$6.6 billion* to address this issue alone.

22 420. The State must also fund programs to keep its park lands and coastlines free of  
23 plastic. Plastic does not biodegrade and lasts forever in a park unit; therefore, constant

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24 <sup>242</sup> See also Assem. Bill 2812 (2015-2016 Reg. Sess.) [recycling in office buildings];  
25 Assem. Bill 901 (2015-2016 Reg. Sess.) [quarterly waste and recycling reporting to CalRecycle];  
26 Assem. Bill 2675 (2014-2015 Reg. Sess.) [state agency purchases of recycled products]; Assem.  
27 Bill 341 (2011-2012 Reg. Sess.) [separation of recyclable materials and implementation of solid  
28 waste recycling programs, statewide 75 percent recycling goal to be achieved by 2020]; Assem.  
Bill 939 (1989 as amended) [divert 25 percent of solid waste by 1995 and 50 percent by year  
2000].

1 maintenance must be done to abate the increasing amounts of plastic that enter the environment.  
 2 Data from citizen clean-ups shows over 50 percent of reported litter collected by volunteers in  
 3 California state parks contains plastic such as bottles, plastic bags, and food wrappers. While  
 4 ExxonMobil continues to produce more and more virgin plastic and deceive the public,  
 5 Californians are left to clean up the mess, year after year.

6 421. The plastic pollution crisis and growing problem of microplastic pollution in  
 7 California's environment has necessitated the development of statewide strategies and guidance,  
 8 including the California Ocean Litter Prevention Strategy<sup>243</sup> and the Statewide Microplastics  
 9 Strategy, to improve coordination across state agencies to advance solutions and guide State  
 10 investments to reduce and prevent ongoing plastic pollution.

11 422. California taxpayers should not bear the entirety of the public investment  
 12 needed to understand, and ultimately remediate, the multitude of damaging effects of plastics.  
 13 Instead, this cost should be allocated to those, such as ExxonMobil, that are responsible for  
 14 creating and intensifying the plastic waste and pollution crisis by its decades-long efforts to  
 15 deceive the public into believing that we can recycle our way out of this mess while  
 16 simultaneously continuing to saturate consumers with an increasing amount of single-use virgin  
 17 plastic materials and products despite the known and foreseeable harms and risks.

## 18 CAUSES OF ACTION

### 19 FIRST CAUSE OF ACTION

#### 20 Public Nuisance

21 (Civil Code Sections 3479, 3480, and 3494)

22 423. Plaintiff re-alleges and incorporates by reference the allegations in each of  
 23 paragraphs 1 through 422 as though fully set forth herein.

24 424. Under Civil Code section 3479, a "nuisance" is "anything which is indecent or  
 25 offensive to the senses," or "an obstruction to the free use of property, so as to interfere with the  
 26 comfortable enjoyment of life or property," or "unlawfully obstructs the free passage or use, in  
 27

28 <sup>243</sup> OPC 2018, *supra*.

1 the customary manner, of any navigable lake, or river, bay, stream, canal, or basin, or any public  
2 park, square, street, or highway.”

3 425. Under Civil Code section 3480, a “public nuisance” is “one which affects at the  
4 same time an entire community or neighborhood, or any considerable number of persons,  
5 although the extent of the annoyance or damage inflicted upon individuals may be unequal.”

6 426. Defendants, individually and in concert with each other, by their affirmative  
7 acts and omissions, have created, caused, contributed to, and assisted in creating harmful plastic  
8 pollution throughout California, which threatens and harms the environment, wildlife, and  
9 communities. These harms are indecent and offensive to the senses, and obstruct the free use of  
10 property, so as to interfere with the comfortable enjoyment of life or property, and therefore  
11 constitute a nuisance.

12 427. Defendants caused, assisted in causing and/or contributed to plastic pollution  
13 that harms and threatens to harm the California environment, wildlife, natural resources, and  
14 communities, by (1) promoting and vastly increasing the production of single-use plastic, while  
15 (2) deceptively promoting that recycling would take care of the consequent tremendous increase  
16 in plastic waste, and (3) while knowing that increasing plastic waste inevitably leads to increasing  
17 plastic pollution and (4) knowing that once plastic enters the environment, it leads to  
18 environmental harms, including through microplastic pollution, which poses an even greater  
19 threat of harm to all living things.

20 428. The plastic-related harms that Defendants created, caused, contributed to, and  
21 assisted in the creation of have substantially and unreasonably interfered with the exercise of  
22 rights common to the public, including the public safety, the public peace, and the public comfort.  
23 These interferences with public rights include, among other things, harms caused to animal  
24 health; aesthetic and physical harm to public spaces and wildlife; interference with the public  
25 recreation and the local coastal economy; disproportionate harms to communities of color; and  
26 contamination of groundwater, beaches, and waterways.

27 429. Defendants caused and/or contributed to the alleged public nuisance by  
28 designing, marketing, developing, distributing, selling, manufacturing, releasing, supplying,

1 using, and/or enabling plastic production and promoting plastic to the public, including  
2 Californians, as sustainable through the use of recycling and “advanced recycling”—all while  
3 knowing to a substantial certainty that the foreseeable and intended use of these products and  
4 recycling or “advanced recycling” would lead to widespread contamination and pollution in  
5 California.

6 430. Defendants and each of them, knowingly, intentionally, and/or recklessly  
7 created, caused, or assisted in the creation of a nuisance by falsely promising Californians, for  
8 almost half a century, that recycling and “advanced recycling” would take care of the ever-  
9 increasing amount of plastic waste generated by Defendants’ production, sale, and promotion of  
10 its plastic products at all times, up to and including today.

11 431. The plastic-related harms that Defendants created, caused, contributed to, and  
12 assisted in the creation of are present throughout California, and therefore affect a considerable  
13 number of persons in California.

14 432. An ordinary person would be reasonably annoyed or disturbed by these harms.

15 433. The harms caused by Defendants’ nuisance-creating conduct are extremely  
16 grave, and far outweigh the social utility of that conduct.

17 434. The plastic-related harms that Defendants created, caused, contributed to, and  
18 assisted in the creation of continue to harm the State and its people into the present day, and will  
19 continue to harm the State and its people many years into the future.

20 435. The State and its people did not consent to Defendants’ conduct.

21 436. The misconduct of Defendants, and each of them, was a substantial factor in  
22 bringing about the continuing public nuisance.

23 437. As a direct and proximate result of Defendants’ acts and omissions, the State  
24 has been required and will be required to expend significant public resources to mitigate the  
25 impacts of plastics-related harms throughout California.

26 438. As a direct and proximate result of Defendants’ acts and omissions,  
27 Californians have sustained and will sustain injuries to public safety and welfare; the loss of use  
28 and enjoyment of natural resources; and obstruction to the free use of public property.

## Action for Equitable Relief for Pollution, Impairment, and Destruction of Natural Resources

440. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

442. The statutory term “natural resource” is defined as including “land, water, air, minerals, vegetation, wildlife, silence, historic or aesthetic sites, or any other natural resource which, irrespective of ownership contributes, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community.” (Gov. Code, § 12605.)

a. Designing, marketing, developing, distributing, selling, manufacturing, releasing, supplying, using, and/or enabling plastic production and promoting plastic to the public, including Californians, as sustainable through the use of recycling and “advanced recycling”—all while knowing to a substantial certainty that the foreseeable and intended use of these products and recycling or “advanced recycling” would lead to widespread contamination and pollution in California;

### Complaint for Abatement, Equitable Relief, and Civil Penalties

- b. Promoting, manufacturing, distributing, marketing and/or selling plastic and especially single-use plastic products without adequate testing or analysis of their impact on communities, and their persistence and disintegration in the environment;
- c. Concealing hazard information from regulators and the public;
- d. Concealing studies and other documents showing the dangers of plastic and the truth about the ability of mechanical recycling and “advanced recycling” to address the massive volume of plastic waste and pollution generated;
- e. Promoting, manufacturing, distributing, marketing and/or selling plastic recycling including “advanced recycling” to the public in California as a means to render plastic, particularly single-use plastic, sustainable, despite knowing that the infrastructure, market, and technology for plastic recycling, particularly for single-use plastics, are and would remain wholly inadequate for the volume of plastic produced and are technically and economically not viable at scale.

444. As a result of Defendants’ misconduct, plastics are polluting California’s natural resources including, but not limited to: drinking water sources; groundwater; surface water in bays, lakes, streams, and rivers; oceans; air; public parks; as well as soils; and fish and wildlife.

445. As a result of Defendants’ misconduct, plastics are polluting “other natural resources” as described in the statute which, “irrespective of ownership contribute, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community.”

446. The pollution, impairment, and destruction of natural resources including water, wildlife, and other natural resources is continuing in nature.

447. The harms caused by Defendants can be equitably remediated because reasonable methods exist for treating, remediating, and/or abating that contamination and its attendant hazards to communities and the environment. In addition, plastic contamination

1 continues to move and spread throughout California, and plastic pollution levels at any given  
2 contamination site fluctuate over time, thus pollution, impairment and destruction are ongoing.

3 448. Defendants' acts and omissions have caused an indivisible harm in California.

### 4 **THIRD CAUSE OF ACTION**

#### 5 **Water Pollution**

6 (Fish and Game Code sections 5650 and 5650.1)

7 449. The People re-allege and incorporate by reference the allegations in each of  
8 paragraphs 1 through 422 as though fully set forth herein.

9 450. Fish and Game Code section 5650, subdivision (a)(6), prohibits any person  
10 from depositing in, permitting to pass into, and placing where it can pass into the waters of the  
11 State any substance or materials deleterious to fish, plant life, mammals, or bird life.

12 451. Fish and Game Code section 5650.1 provides for injunctive relief and civil  
13 penalties of not more than \$25,000 for each such violation of Fish and Game Code section 5650.  
14 Such penalty is in addition to any other civil penalty imposed by law.

15 452. At all times relevant to this Complaint, Defendants, through their deception,  
16 permitted to pass into the waters of the State plastic waste, in violation of Fish and Game Code  
17 section 5650, subdivision (a)(6).

18 453. Defendants, through their deception, continue to permit to pass into the waters  
19 of the State plastic waste, in violation of Fish and Game Code section 5650, subdivision (a)(6).

20 454. Plastic waste is a substance and material deleterious to fish, plant life,  
21 mammals, and bird life. At all times relevant to this Complaint, Defendants, through their  
22 deception, unlawfully permitted to pass into the waters of the State plastic waste, a substance and  
23 material deleterious to fish, plant life, mammals, and bird life, in violation of Fish and Game  
24 Code section 5650. Defendants are liable for civil penalties as set forth in Fish and Game Code  
25 section 5650.1 for each and every separate violation of any of these provisions of the Fish and  
26 Game Code and any permit, rule, regulation, standard, or requirement issued or promulgated  
27 pursuant thereto.

28 ///

**FOURTH CAUSE OF ACTION**

**Untrue or Misleading Advertising**

(Business and Professions Code section 17500)

455. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

456. Defendants, and each of them, have engaged in and continue to engage in acts or practices that constitute violations of the False Advertising Law, Business and Professions Code section 17500 et seq.

457. Defendants, with the intent to induce members of the public to purchase and utilize plastics products, made or caused to be made and/or disseminated untrue or misleading statements concerning plastics and plastics recycling, which Defendants knew, or by the exercise of reasonable care should have known, were untrue or misleading at the time they were made. Such misrepresentations include, but are not limited to:

- a. That single-use plastic is environmentally beneficial or benign;
- b. That effective techniques exist for recycling plastic;
- c. That the infrastructure, market, and technology for plastic recycling, particularly for single-use plastics, are, or are reasonably expected to become, adequate to address the volume of plastic produced;
- d. That recycling plastic is economically viable;
- e. That products bearing “mass balance” and “certified circular polymer” certificates are “recycled,” “circular,” or environmentally beneficial or benign;
- f. That products contain a particular percentage of recycled material that they do not actually contain;
- g. That “advanced recycling” is new or breakthrough technology;

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- h. That “advanced recycling” is a viable, effective, efficient, or scalable method for reducing plastic waste and pollution.
- i. That plastics do not create environmental hazards or that such hazards are negligible.

## FIFTH CAUSE OF ACTION

### Misleading Environmental Marketing

(Business and Professions Code section 17580.5)

458. The People re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

459. Defendants, and each of them, have made environmental marketing claims that are untruthful, deceptive, and/or misleading, whether explicitly or implicitly, in violation of Business and Professions Code section 17580.5.

460. Such misleading environmental marketing claims include, but are not limited to, such deceptive representations as:

- a. Marketing plastic as infinitely recyclable;
- b. Marketing plastic as universally recyclable and “advanced recycling” as easy and inclusive, when most Californians do not have access to recycling for all products made of plastic and all plastic types;
- c. Marketing plastic, particularly single-use plastic, as sustainable based on its ostensible recyclability;
- d. Marketing chemical processes such as “advanced recycling” or pyrolysis as a legitimate, clean and/or effective plastic recycling process, when in fact the yield of plastic produced from these chemical processes is approximately eight percent;
- e. Marketing chemical processes such “advanced recycling” or pyrolysis as a legitimate effective plastic recycling process, when in fact the process transforms the vast majority of plastic waste into fuel and other non-plastic products and byproducts;

- f. Selling “certified circular polymer” certificates through “advanced recycling” based on a 90 to 100 percent yield, with knowledge that the yield was much lower;
- g. Claiming mass balance and/or free attribution or free allocation is a legitimate approach to claim “certified” “circular polymer credits” and is a legitimate technique for measuring effective recycling, when in fact it primarily produces fuel, which is incinerated, and other non-circular products;
- h. Selling “certified circular polymer” certificates based on false high yields; and
- i. Selling “certified circular polymer” certificates based on equivalency with having a certain amount of recycled or waste plastic content.

## SIXTH CAUSE OF ACTION

### Unfair Competition

(Business and Professions Code section 17200)

461. The people re-allege and incorporate by reference the allegations in each of paragraphs 1 through 422 as though fully set forth herein.

462. Defendants have engaged in and continue to engage in unlawful, unfair, or fraudulent business acts or practices and unfair, deceptive, untrue, or misleading advertising that constitute unfair competition as defined in the Unfair Competition Law, Business and Professions Code section 17200 et seq. These acts or practices include, but are not limited to, the following:

- a. Creating or assisting in the creation of a public nuisance in violation of Civil Code section 3479, as alleged in the First Cause of Action;
- b. Engaging in conduct that caused or contributed to the pollution, impairment, and destruction of natural resources in violation of Government Code section 12607, as alleged in the Second Cause of Action;
- c. Permitting plastic waste to pass into the waters of the State, in violation of Fish and Game Code sections 5650, subdivision (a)(6), and 5650.1, as alleged in the Third Cause of Action;
- d. Disseminating untrue and misleading statements to the public in violation of

Business and Professions Code section 17500, as alleged in the Fourth Cause of Action; and

- e. Making misleading environmental marketing claims in violation of Business and Professions Code section 17580.5, as alleged in the Fifth Cause of Action.
- f. Deceptively promoting the use and consumption of plastics when they knew or should have known that plastics create hazards to communities and the environment, including fragmentation of plastic polymers into microplastics, which leach into air, land, and water.

### PRAYER FOR RELIEF

WHEREFORE, the People respectfully request that the Court enter judgment in favor of the People and against Defendants, as follows:

463. Compelling Defendants to abate the ongoing public nuisance their conduct has created in California, including by establishing and contributing to an abatement fund to pay the costs of such abatement;

464. Preliminary and permanent injunctive relief ordering Defendants to cease and desist any and all deceptive public statements related to its plastic operations, including but not limited to referring to its operations and products by the terms “advanced recycling,” “chemical recycling,” “circular,” “certified circular polymers,” and “recyclable”;

465. Granting any and all temporary and permanent equitable relief and imposing such conditions upon Defendants as are required to protect and/or prevent further pollution, impairment, and destruction of the natural resources of California pursuant to Government Code sections 12607 and 12610;

466. That the Court make such orders or judgments as may be necessary to prevent the use or employment by any Defendant of any practice that constitutes unfair competition or false advertising, under the authority of Business and Professions Code sections 17203 and 17535, respectively;

467. That the Court assess a civil penalty of \$2,500 against each Defendant for each violation of Business and Professions Code section 17200 in an amount according to proof, under

1 the authority of Business and Professions Code section 17206;

2 468. That the Court assess a civil penalty of \$2,500 against each Defendant for each  
3 violation of Business and Professions Code section 17500 in an amount according to proof, under  
4 the authority of Business and Professions Code section 17536;

5 469. In addition to any penalties assessed under Business and Professions Code  
6 sections 17206 and 17536, that the Court assess a civil penalty of \$2,500 against each Defendant  
7 for each violation of Business and Professions Code section 17200 perpetrated against a senior  
8 citizen or disabled person, in an amount according to proof, under the authority of Business and  
9 Professions Code section 17206.1;

10 470. That the Court award disgorgement in an amount according to proof, under the  
11 authority of Government Code section 12527.6;

12 471. Pursuant to Fish and Game Code section 5650.1(e), granting any and all  
13 temporary and permanent equitable relief and imposing such conditions upon Defendants as  
14 required to prevent further violations of Fish and Game Code section 5650;

15 472. Pursuant to Fish and Game Code section 5650.1(a), assessing a civil penalty of  
16 twenty-five thousand dollars (\$25,000) against Defendants for each violation of Fish and Game  
17 Code section 5650, as proved at trial;

18 473. Pursuant to Fish and Game Code section 5650.1, subdivision (i), assessing a  
19 civil penalty of ten dollars (\$10) for each gallon or pound of material discharged;

20 474. Pursuant to Fish and Game Code section 12015, subdivision (a), ordering  
21 Defendants to remove any substance placed in the waters of the State, or to remove any material  
22 threatening to pollute, contaminate, or obstruct waters of the State, which can be removed, that  
23 caused the prohibited condition, or to pay the costs of the removal by the State;

24 475. Pursuant to Fish and Game Code section 12016, subdivision (a), awarding  
25 actual damages to fish, plant, bird, or animal life or their habitat and, in addition, for the  
26 reasonable costs incurred by the State in cleaning up the deleterious substance or material or  
27 abating its effects, or both.

28 476. Pursuant to Code of Civil Procedure section 1021.8, Government Code section

1 12607, Fish and Game Code section 5650.1, and Civil Code section 3494, awarding to the  
2 Attorney General all costs of investigating and prosecuting claims aimed at protecting  
3 California's natural resources, including expert fees, reasonable attorneys' fees, and costs in an  
4 amount according to proof;

5 477. Ordering that the People recover its costs of suit, including costs of  
6 investigation;

7 478. Order that the People receive all other relief that they are legally entitled; and

8 479. Awarding such other relief that the Court deems just, proper, and equitable.

9 **REQUEST FOR JURY TRIAL**

10 The People respectfully request that all issues presented by the above Complaint be tried by  
11 a jury, with the exception of those issues that, by law, must be tried before the Court.

12  
13 Dated: September 23, 2024

Respectfully submitted,

14 ROB BONTA  
15 Attorney General of California  
16 DANIEL A. OLIVAS  
17 Senior Assistant Attorney General  
18 DEBORAH M. SMITH  
19 Supervising Deputy Attorney General



20 JUSTIN J. LEE  
21 Deputy Attorney General  
22 *Attorneys for Plaintiff*  
23 *The People of the State of California, ex rel.*  
24 *Rob Bonta, Attorney General of California*

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## **NOTICE TO PLAINTIFF**

A Case Management Conference is set for:

**DATE: FEB 26, 2025**

**TIME: 10:30 am**

**PLACE: Department 610  
400 McAllister Street  
San Francisco, CA 94102-3680**

All parties must appear and comply with Local Rule 3.

CRC 3.725 requires the filing and service of a case management statement form CM-110 no later than 15 days before the case management conference. However, it would facilitate the issuance of a case management order **without an appearance** at the case management conference if the case management statement is filed and served twenty-five days before the case management conference.

Plaintiff must serve a copy of this notice upon each party to this action with the summons and complaint. Proof of service subsequently filed with this court shall so state. **This case is eligible for electronic filing and service per Local Rule 2.11. For more information, please visit the Court's website at <https://sf.courts.ca.gov> under Online Services.**

**[DEFENDANTS: Attending the Case Management Conference does not take the place of filing a written response to the complaint. You must file a written response with the court within the time limit required by law. See Summons.]**

## **ALTERNATIVE DISPUTE RESOLUTION REQUIREMENTS**

**IT IS THE POLICY OF THE SUPERIOR COURT THAT EVERY CIVIL CASE SHOULD PARTICIPATE IN MEDIATION, ARBITRATION, NEUTRAL EVALUATION, AN EARLY SETTLEMENT CONFERENCE, OR OTHER APPROPRIATE FORM OF ALTERNATIVE DISPUTE RESOLUTION PRIOR TO A TRIAL.**

(SEE LOCAL RULE 4)

Plaintiff **must** serve a copy of the Alternative Dispute Resolution (ADR) Information Package on each defendant along with the complaint. (CRC 3.221.) The ADR package may be accessed at <https://sf.courts.ca.gov/divisions/civil-division/alternative-dispute-resolution> or you may request a paper copy from the filing clerk. All counsel must discuss ADR with clients and opposing counsel and provide clients with a copy of the ADR Information Package prior to filing the Case Management Statement.

**Superior Court Alternative Dispute Resolution Administrator  
400 McAllister Street, Room 103-A  
San Francisco, CA 94102  
[adrcoordinator@sftc.org](mailto:adrcoordinator@sftc.org)**

See Local Rules 3.3, 6.0 C and 10 B re stipulation to judge pro tem.



**Superior Court of California, County of San Francisco**  
**Information Sheet**  
**Voluntary Expedited Jury Trial Summary**

The San Francisco Superior Court encourages the use of Voluntary Expedited Jury Trials ("EJTs") in appropriate cases. EJTs provide an excellent opportunity to resolve your client's case in an expeditious and inexpensive way. Voluntary EJTs are authorized by statute. CCP §§ 630.01.

EJTs can resolve your entire case or a single important case critical issue that, once adjudicated, can promote resolution of the entire case (for example: course and scope of employment, causation of an injury, whether a contract was formed, etc.) EJTs promote equal access to civil justice as they are less expensive, consume fewer courtroom days, provide flexibility throughout, encourage high/low agreements to limit risk, and feature streamlined pre-trial procedures.

These are highlights of an EJT (C.C.P. §§ 630.01 et seq. and Rules of Court 3.1549 - 3.1553):

- Parties encouraged to submit a joint jury questionnaire;
- 8 jurors (6 must agree);
- 3 peremptory challenges per side;
- 5-hour time limit per side unless agreed otherwise and approved;
- One to two court days completion unless agreed otherwise and approved;
- Option to present evidence by stipulation and objection;
- High/low arrangement option;
- Limited appeal (misconduct by judge or jury substantially affecting parties' rights or corruption, or bad faith.)

If the parties agree to the Voluntary EJT, they should file and serve the completed and signed (Proposed) Consent Order for Voluntary Expedited Jury Trial, Judicial Council Form EJT-020.

SUM-100

**SUMMONS**  
**(CITACION JUDICIAL)**

FOR COURT USE ONLY  
(SOLO PARA USO DE LA CORTE)

**NOTICE TO DEFENDANT:**  
**(AVISO AL DEMANDADO):**

EXXON MOBIL CORPORATION; AND DOES 1 THROUGH 100, INCLUSIVE

**YOU ARE BEING SUED BY PLAINTIFF:**  
**(LO ESTÁ DEMANDANDO EL DEMANDANTE):**

THE PEOPLE OF THE STATE OF CALIFORNIA, ex rel. ROB BONTA, ATTORNEY GENERAL  
OF CALIFORNIA

NOTICE! You have been sued. The court may decide against you without your being heard unless you respond within 30 days. Read the information below.

You have 30 CALENDAR DAYS after this summons and legal papers are served on you to file a written response at this court and have a copy served on the plaintiff. A letter or phone call will not protect you. Your written response must be in proper legal form if you want the court to hear your case. There may be a court form that you can use for your response. You can find these court forms and more information at the California Courts Online Self-Help Center ([www.courtinfo.ca.gov/selfhelp](http://www.courtinfo.ca.gov/selfhelp)), your county law library, or the courthouse nearest you. If you cannot pay the filing fee, ask the court clerk for a fee waiver form. If you do not file your response on time, you may lose the case by default, and your wages, money, and property may be taken without further warning from the court.

There are other legal requirements. You may want to call an attorney right away. If you do not know an attorney, you may want to call an attorney referral service. If you cannot afford an attorney, you may be eligible for free legal services from a nonprofit legal services program. You can locate these nonprofit groups at the California Legal Services Web site ([www.lawhelpcalifornia.org](http://www.lawhelpcalifornia.org)), the California Courts Online Self-Help Center ([www.courtinfo.ca.gov/selfhelp](http://www.courtinfo.ca.gov/selfhelp)), or by contacting your local court or county bar association. **NOTE:** The court has a statutory lien for waived fees and costs on any settlement or arbitration award of \$10,000 or more in a civil case. The court's lien must be paid before the court will dismiss the case. **¡AVISO!** Lo han demandado. Si no responde dentro de 30 días, la corte puede decidir en su contra sin escuchar su versión. Lea la información a continuación.

Tiene 30 DÍAS DE CALENDARIO después de que le entreguen esta citación y papeles legales para presentar una respuesta por escrito en esta corte y hacer que se entregue una copia al demandante. Una carta o una llamada telefónica no lo protegen. Su respuesta por escrito tiene que estar en formato legal correcto si desea que procesen su caso en la corte. Es posible que haya un formulario que usted pueda usar para su respuesta. Puede encontrar estos formularios de la corte y más información en el Centro de Ayuda de las Cortes de California ([www.sucorte.ca.gov](http://www.sucorte.ca.gov)), en la biblioteca de leyes de su condado o en la corte que le quede más cerca. Si no puede pagar la cuota de presentación, pida al secretario de la corte que le dé un formulario de exención de pago de cuotas. Si no presenta su respuesta a tiempo, puede perder el caso por incumplimiento y la corte le podrá quitar su sueldo, dinero y bienes sin más advertencia.

Hay otros requisitos legales. Es recomendable que llame a un abogado inmediatamente. Si no conoce a un abogado, puede llamar a un servicio de remisión a abogados. Si no puede pagar a un abogado, es posible que cumpla con los requisitos para obtener servicios legales gratuitos de un programa de servicios legales sin fines de lucro. Puede encontrar estos grupos sin fines de lucro en el sitio web de California Legal Services, ([www.lawhelpcalifornia.org](http://www.lawhelpcalifornia.org)), en el Centro de Ayuda de las Cortes de California, ([www.sucorte.ca.gov](http://www.sucorte.ca.gov)) o poniéndose en contacto con la corte o el colegio de abogados locales. **AVISO:** Por ley, la corte tiene derecho a reclamar las cuotas y los costos exentos por imponer un gravamen sobre cualquier recuperación de \$10,000 ó más de valor recibida mediante un acuerdo o una concesión de arbitraje en un caso de derecho civil. Tiene que pagar el gravamen de la corte antes de que la corte pueda desechar el caso.

The name and address of the court is: San Francisco Superior Court  
(El nombre y dirección de la corte es): Civic Center Courthouse

400 McAllister St., San Francisco, CA 94102

CASE NUMBER:  
(Número del Caso):

**CGC-24-618323**

The name, address, and telephone number of plaintiff's attorney, or plaintiff without an attorney, is: Justin J. Lee (SBN 307148)  
(El nombre, la dirección y el número de teléfono del abogado del demandante, o del demandante que no tiene abogado, es):  
Office of the Attorney General, 300 S. Spring St., Suite 1702, Los Angeles, CA 90013, (213) 269-6000

DATE: **09/25/2024**  
(Fecha)

Clerk, by **ANNIE PASCUAL**, Deputy  
(Secretario) (Adjunto)

(For proof of service of this summons, use Proof of Service of Summons (form POS-010).)

(Para prueba de entrega de esta citación use el formulario Proof of Service of Summons, (POS-010)).

[SEAL]



**NOTICE TO THE PERSON SERVED: You are served**

1. ☐ as an individual defendant.
2. ☐ as the person sued under the fictitious name of (specify):
3. ☐ on behalf of (specify):  
under: ☐ CCP 416.10 (corporation) ☐ CCP 416.60 (minor)  
☐ CCP 416.20 (defunct corporation) ☐ CCP 416.70 (conservatee)  
☐ CCP 416.40 (association or partnership) ☐ CCP 416.90 (authorized person)  
☐ other (specify):
4. ☐ by personal delivery on (date):

Filing Fee Exempt Pursuant to Gov. Code 6103

SUM-100

# SUMMONS

## (CITACION JUDICIAL)

FOR COURT USE ONLY  
(SOLO PARA USO DE LA CORTE)

### NOTICE TO DEFENDANT: (AVISO AL DEMANDADO):

EXXON MOBIL CORPORATION; AND DOES 1 THROUGH 100, INCLUSIVE

### YOU ARE BEING SUED BY PLAINTIFF: (LO ESTÁ DEMANDANDO EL DEMANDANTE):

THE PEOPLE OF THE STATE OF CALIFORNIA, ex rel. ROB BONTA, ATTORNEY GENERAL  
OF CALIFORNIA

NOTICE! You have been sued. The court may decide against you without your being heard unless you respond within 30 days. Read the information below.

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The name and address of the court is: San Francisco Superior Court  
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400 McAllister St., San Francisco, CA 94102

CASE NUMBER:  
(Número del Caso):

CGC-24-618323

The name, address, and telephone number of plaintiff's attorney, or plaintiff without an attorney, is: Justin J. Lee (SBN 307148)  
(El nombre, la dirección y el número de teléfono del abogado del demandante, o del demandante que no tiene abogado, es):  
Office of the Attorney General, 300 S. Spring St., Suite 1702, Los Angeles, CA 90013, (213) 269-6000

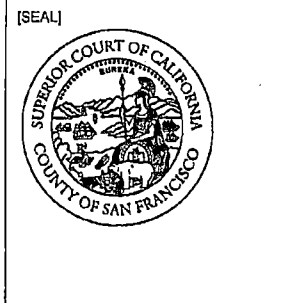
DATE: 09/25/2024  
(Fecha)Clerk, by  
(Secretario)

ANNIE PASCUAL

Deputy  
(Adjunto)

(For proof of service of this summons, use Proof of Service of Summons (form POS-010).)

(Para prueba de entrega de esta citación use el formulario Proof of Service of Summons, (POS-010)).

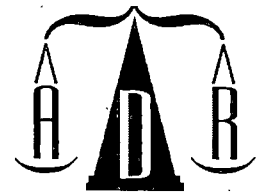


## NOTICE TO THE PERSON SERVED: You are served

- ☐ as an individual defendant.
- ☐ as the person sued under the fictitious name of (specify):
- ☒ on behalf of (specify): **EXXON Mobil corporation**  
under: ☒ CCP 416.10 (corporation) ☐ CCP 416.60 (minor)  
☐ CCP 416.20 (defunct corporation) ☐ CCP 416.70 (conservatee)  
☐ CCP 416.40 (association or partnership) ☐ CCP 416.90 (authorized person)  
☐ other (specify):
- ☒ by personal delivery on (date): **10/04/2024**



## Superior Court of California, County of San Francisco Alternative Dispute Resolution Information Package



The plaintiff must serve a copy of the ADR Information Package on each defendant along with the complaint. Cross-complainants must serve a copy of the ADR Information Package on any new parties to the action together with the cross-complaint. (CRC 3.221(c).)

### WHAT IS ADR?

Alternative Dispute Resolution (ADR) is the term used to describe the various options available for settling a dispute without a trial. There are many different ADR processes, the most common forms of which are mediation, arbitration and settlement conferences. In ADR, trained, impartial people decide disputes or help parties decide disputes themselves. They can help parties resolve disputes without having to go to trial.

### WHY CHOOSE ADR?

It is the policy of the Superior Court that every long cause, non-criminal, non-juvenile case should participate either in an early settlement conference, mediation, arbitration, early neutral evaluation or some other alternative dispute resolution process prior to trial. (Local Rule 4.)

ADR can have a number of advantages over traditional litigation:

- **ADR can save time.** A dispute often can be resolved in a matter of months, even weeks, through ADR, while a lawsuit can take years.
- **ADR can save money,** including court costs, attorney fees, and expert fees.
- **ADR encourages participation.** The parties may have more opportunities to tell their story than in court and may have more control over the outcome of the case.
- **ADR is more satisfying.** For all the above reasons, many people participating in ADR have reported a high degree of satisfaction.

**\*\*Electing to participate in an ADR process does not stop the time period to respond to a complaint or cross-complaint\*\***

### WHAT ARE THE ADR OPTIONS?

The San Francisco Superior Court offers different types of ADR processes for general civil matters. The programs are described below:

#### 1) MANDATORY SETTLEMENT CONFERENCES

Settlement conferences are appropriate in any case where settlement is an option. The goal of settlement conferences is to provide participants an opportunity to reach a mutually acceptable settlement that resolves all or part of a dispute. Mandatory settlement conferences are ordered by the court and are often held near the date a case is set for trial, although they may be held earlier if appropriate. A party may elect to apply to the Presiding Judge for a specially set mandatory settlement conference by filing an ex parte application. See Local Rule 5.0 for further instructions. Upon approval by the Presiding Judge, the court will schedule the conference and assign a settlement conference officer.

**2) MEDIATION**

Mediation is a voluntary, flexible, and confidential process in which a neutral third party facilitates negotiations. The goal of mediation is to reach a mutually satisfactory agreement that resolves all or part of a dispute after exploring the interests, needs, and priorities of the parties in light of relevant evidence and the law.

**(A) MEDIATION SERVICES OF THE BAR ASSOCIATION OF SAN FRANCISCO (BASF):** The ADR DEPARTMENT OF THE BAR ASSOCIATION OF SAN FRANCISCO (BASF), in cooperation with the Superior Court, is designed to help civil litigants resolve disputes before they incur substantial costs in litigation. BASF's panel of experienced, professional and impartial mediators work with parties to help them arrive at mutually agreeable solutions. Parties can select their mediator from the website [www.sfbar.org/mediation](http://www.sfbar.org/mediation) or BASF can assist with mediator selection. BASF pre-screens all mediators based upon strict educational and experience requirements and handles administrative matters, including conflict checks and case management. BASF charges an initial fee of \$295 per party, which covers (1) BASF's administration costs, (2) the first hour of preparation time, and (3) the first two hours of mediation time. Mediation time beyond that is charged at the mediator's hourly rate, which varies depending on the mediator selected. Waivers of BASF's fee are available to those who qualify. For more information, call 415-982-1600 or email [adr@sfbar.org](mailto:adr@sfbar.org).

**(B) JUDICIAL MEDIATION PROGRAM** provides mediation with a San Francisco Superior Court judge for civil cases, which include but are not limited to, personal injury, construction defect, employment, professional malpractice, insurance coverage, toxic torts and industrial accidents. Parties may utilize this program at any time throughout the litigation process. Parties interested in judicial mediation should file a Stipulation to Judicial Mediation indicating a joint request for inclusion in the program. A preference for a specific judge may be indicated. The court will coordinate assignment of cases for the program. There is no charge. Information about the Judicial Mediation Program may be found by visiting the ADR page on the court's website: [www.sfsuperiorcourt.org/divisions/civil/dispute-resolution](http://www.sfsuperiorcourt.org/divisions/civil/dispute-resolution).

**(C) PRIVATE MEDIATION:** Although not currently a part of the court's ADR program, parties may select any private mediator of their choice. The selection and coordination of private mediation is the responsibility of the parties. Parties may find mediators and organizations on the Internet. The cost of private mediation will vary depending on the mediator selected.

**(D) COMMUNITY BOARDS MEDIATION SERVICES:** Mediation services are offered by Community Boards (CB), a nonprofit resolution center, under the Dispute Resolution Programs Act. CB utilizes a three-person panel mediation process in which mediators work as a team to assist the parties in reaching a shared solution. To the extent possible, mediators are selected to reflect the demographics of the disputants. CB has a success rate of 85% for parties reaching a resolution and a consumer satisfaction rate of 99%. The fee is \$45-\$100 to open a case, and an hourly rate of \$180 for complex cases. Reduction and waiver of the fee are available. For more information, call 415-920-3820 or visit [communityboards.org](http://communityboards.org).

**3) ARBITRATION**

An arbitrator is a neutral attorney who presides at a hearing where the parties present evidence through exhibits and testimony. The arbitrator applies the law to the facts of the case and makes an award based upon the merits of the case.

**(A) JUDICIAL ARBITRATION**

When the court orders a case to arbitration it is called "judicial arbitration". The goal of arbitration is to provide parties with an adjudication that is earlier, faster, less formal, and usually less expensive than a trial. Pursuant to CCP 1141.11, all civil actions in which the amount in controversy is \$50,000 or less, and no party seeks equitable relief, shall be ordered to arbitration. (Upon stipulation of all parties, other civil matters may be submitted to judicial arbitration.) An arbitrator is chosen from the court's arbitration panel. Arbitrations are generally held between 7 and 9 months after a complaint has been filed. Judicial arbitration is not binding unless all parties agree to be bound by the arbitrator's decision. Any party may request a trial within 60 days after the arbitrator's award has been filed. Local Rule 4.1 allows for mediation in lieu of judicial arbitration, so long as the parties file a stipulation to mediate after being assigned to judicial arbitration. There is no cost to the parties for judicial arbitration.

**(B) PRIVATE ARBITRATION**

Although not currently a part of the court's ADR program, civil disputes may also be resolved through private arbitration. Here, the parties voluntarily consent to arbitration. If all parties agree, private arbitration may be binding and the parties give up the right to judicial review of the arbitrator's decision. In private arbitration, the parties select a private arbitrator and are responsible for paying the arbitrator's fees.

**HOW DO I PARTICIPATE IN ADR?**

Litigants may elect to participate in ADR at any point in a case. General civil cases may voluntarily enter into the court's or court-affiliated ADR programs by any of the following means:

- Filing a Stipulation to ADR: Complete and file the Stipulation form (attached to this packet and available on the court's website); or
- Indicating your ADR preferences on the Case Management Statement (available on the court's website); or
- Contacting the court's ADR Department (see below), the Bar Association of San Francisco's ADR Services, or Community Boards.

**For more information about ADR programs or dispute resolution alternatives, contact:**

Superior Court Alternative Dispute Resolution  
400 McAllister Street, Room 103-A, San Francisco, CA 94102  
adrcoordinator@sftc.org

Or, visit the court's ADR page at [www.sfsuperiorcourt.org/divisions/civil/dispute-resolution](http://www.sfsuperiorcourt.org/divisions/civil/dispute-resolution)

**TO PARTICIPATE IN ANY OF THE COURT'S ADR PROGRAMS, PLEASE COMPLETE AND FILE THE ATTACHED STIPULATION TO ADR AND SUBMIT IT TO THE COURT. YOU MUST ALSO CONTACT BASF OR COMMUNITY BOARDS TO ENROLL IN THEIR LISTED PROGRAMS. THE COURT DOES NOT FORWARD COPIES OF STIPULATIONS TO BASF OR COMMUNITY BOARDS.**

01/24

- 



Judge Requested (see list of Judges currently participating in the program): \_\_\_\_\_

☐ 30-90 days ☐ 90-120 days ☐ Other (please specify) \_\_\_\_\_

- 

2) The parties agree that the ADR Process shall be completed by (date): \_\_\_\_\_

- Dated: \_\_\_\_\_

- ## STIPULATION TO ALTERNATIVE DISPUTE RESOLUTION

*(Separate proof of service is required for each party served.)*

- Page 1 of 2

Plaintiff: <b>THE PEOPLE OF THE STATE OF CALIFORNIA, ex. rel. ROB BONTA, ATTORNEY GENERAL OF CALIFORNIA,</b> Defendant: <b>EXXON MOBIL CORPORATION</b>	Case Number: <b>CGC-24-618323</b>
---	-----------------------------------

- c. ☐ **by mail and acknowledgment of receipt of service.** I mailed the documents listed in item 2 to the party, to the address shown in item 4, by first-class mail, postage prepaid,
- (1) on (date): \_\_\_\_\_ (2) from (city): \_\_\_\_\_
- (3) ☐ with two copies of the *Notice and Acknowledgment of Receipt* and a postage-paid return envelope addressed to me. (*Attach completed Notice and Acknowledgement of Receipt.*) (Code Civ. Proc., § 415.30.)
- (4) ☐ to an address outside California with return receipt requested. (Code Civ. Proc., § 415.40.)
- d. ☐ **by other means** (*specify means of service and authorizing code section*): \_\_\_\_\_
- ☐ Additional page describing service is attached.
6. The "Notice to the Person Served" (on the summons) was completed as follows:
- a. ☐ as an individual defendant.
- b. ☐ as the person sued under the fictitious name of (*specify*): \_\_\_\_\_
- c. ☐ as occupant.
- d. ☒ On behalf of (*specify*): **EXXON MOBIL CORPORATION**  
under the following Code of Civil Procedure section:
- |   |   |
|---|---|
| <input checked="" type="checkbox"/> 416.10 (corporation)          | <input type="checkbox"/> 415.95 (business organization, form unknown) |
| <input type="checkbox"/> 416.20 (defunct corporation)             | <input type="checkbox"/> 416.60 (minor)                               |
| <input type="checkbox"/> 416.30 (joint stock company/association) | <input type="checkbox"/> 416.70 (ward or conservatee)                 |
| <input type="checkbox"/> 416.40 (association or partnership)      | <input type="checkbox"/> 416.90 (authorized person)                   |
| <input type="checkbox"/> 416.50 (public entity)                   | <input type="checkbox"/> 415.46 (occupant)                            |
|   | <input type="checkbox"/> other: _____                                 |

7. **Person who served papers**

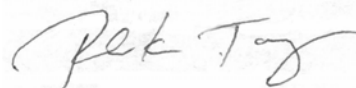
- a. Name: **Rodmark Tay - Ace Attorney Service, Inc.**
- b. Address: **800 S. Figueroa Street, Suite 900 Los Angeles, CA 90017**
- c. Telephone number: **(213) 623-3979**
- d. **The fee** for service was: **\$ 155.00**
- e. I am:
- (1) ☐ not a registered California process server.
- (2) ☐ exempt from registration under Business and Professions Code section 22350(b).
- (3) ☒ registered California process server:
- (i) ☐ owner ☒ employee ☐ independent contractor.
- (ii) Registration No.: **2022-010**
- (iii) County: **SACRAMENTO**

8. ☒ **I declare** under penalty of perjury under the laws of the State of California that the foregoing is true and correct.
- or
9. ☐ **I am a California sheriff or marshal and** I certify that the foregoing is true and correct.

Date: **10/8/2024**

**Rodmark Tay**

(NAME OF PERSON WHO SERVED PAPERS/SHERIFF OR MARSHAL)



(Signature - Per CC §1633.7)

# **EXHIBIT 2**

**REPORT ON THE  
RUBBER PROGRAM  
SUPPLEMENT NO. 1  
YEAR 1945**



**OFFICE OF RUBBER RESERVE  
RECONSTRUCTION FINANCE  
CORPORATION**

*April 8, 1946*

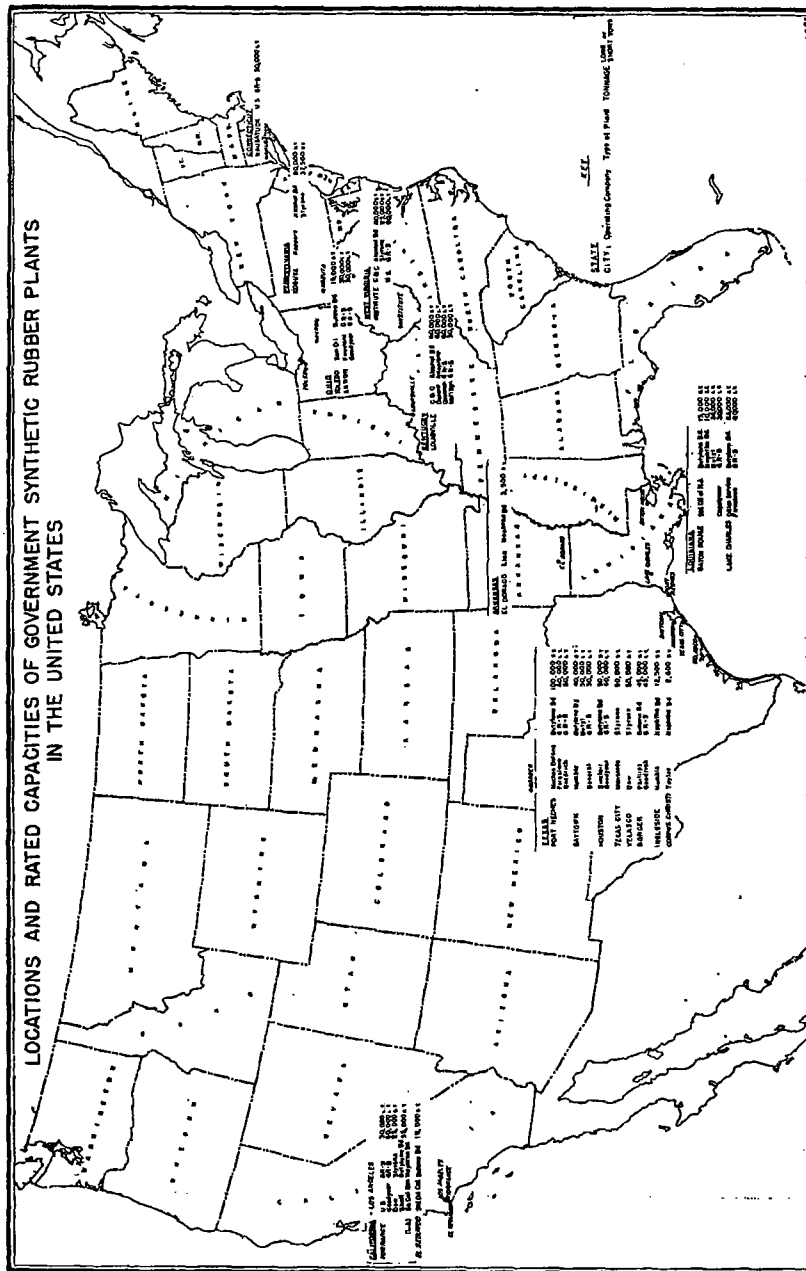
FEDERAL FACILITIES CORPORATION  
RECORDS  
SYNTHETIC RUBBER ✓

*See letter 12/13/46 Hadlock to Gundersen*

1014366

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BAYHIS-00002683



**1014367**

RECONSTRUCTION FINANCE CORPORATION  
OFFICE OF RUBBER RESERVE  
WASHINGTON 25, D. C.

April 8, 1946

To The Board of Directors:

On February 24, 1945, Rubber Reserve Company issued a "Report on the Rubber Program, 1940-1945" covering activities of Rubber Reserve from the date of its creation to January 1, 1945.

Rubber Reserve Company was consolidated with the Reconstruction Finance Corporation on July 1, 1945. As a result, the Office of Rubber Reserve was established as the division responsible for the production and distribution of synthetic rubber and for the sale and distribution of natural rubber.

Production of synthetic rubber in the Government plants during 1945, which adequately met military and civilian requirements, totaled 801,888 long tons. Operating rates during the period of unrestricted feedstock supply attained a level of approximately 1,000,000 long tons per year. The 1945 production exceeded by a substantial margin the 737,131 long tons produced in 1944. It is currently estimated that synthetic rubber production in 1946 will total approximately 725,000 long tons.

In 1945, 135,672 long tons of natural rubber were received in the United States and 115,239 long tons were distributed to the American rubber industry.

The Office of Rubber Reserve submits herewith its "Report on the Rubber Program—Supplement No. 1, Year 1945," which, with the 1940-1945 report, covers the rubber program in detail to January 1, 1946.

The undersigned wishes to acknowledge the contribution made by former officers and members of the staff of Rubber Reserve and by the present organization for their part in the accomplishments recorded in this report.



Executive Director

1014368

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FEDERAL FACILITIES CORPORATION  
RECORDS  
SYNTHETIC RUBBER

### SECTION I--SUMMARY

#### *Organization*

The rubber program was administered from June 28, 1940, until June 30, 1945, by Rubber Reserve Company, created by the Reconstruction Finance Corporation under authority granted by Congress. Upon the dissolution of the company its assets, liabilities and functions were transferred to RFC which, on July 1, 1945, established the Office of Rubber Reserve to carry out duties which continued to be necessary in the operation of the synthetic rubber industry and the distribution of natural rubber. The program has been primarily Government-owned and entirely Government-controlled. Sales and distribution activities were implemented by rubber consumption regulations issued by the War Production Board and its successor, the Civilian Production Administration.

#### *1945 Synthetic Rubber Activities*

The outstanding development of the rubber program throughout the war was the creation of a vast synthetic rubber industry in the United States, a factor profoundly influencing both national and international rubber economies. By the end of 1944, fifty-one plants, including butadiene, styrene, copolymer, chemical, catalyst, Neoprene and butyl plants, had been constructed and put into operation under supervision of Rubber Reserve. Forty-nine rubber, chemical, petroleum and industrial companies participated in the operation of these facilities.

A total of 801,888 long tons of synthetic rubber were produced in Government plants in 1945. The following table shows the year's production on the basis of the three principal types produced:

1945 PRODUCTION BY RUBBER TYPES

Type	Description	Long Tons
GR-S	A copolymer of butadiene and styrene, the first produced from petroleum or alcohol, the second from ethylene, a product of petroleum or alcohol, and benzene, a product of petroleum or coal.....	717,688
GR-M	A product in which the principal raw materials are acetylene, salt and sulfuric acid.....	36,332
GR-I	A product in which the principal components are isobutylene and isoprene, both petroleum products.....	47,868

Small quantities of specialty rubbers were produced during the year in privately owned plants and some quantities of GR-S and GR-I were imported from Canada.

Production schedules for GR-S were considerably reduced in the last quarter of 1945 in accordance with the forecasts of demand made by responsible Government agencies in anticipation of substantially increased supplies of natural rubber from the Far East. These reductions were made primarily on the basis of economic advantage to the Government. Cost of GR-S depends largely upon the cost of feedstocks used to produce butadiene, one of the two principal ingredients. Butadiene was produced during the war from both industrial alcohol and petroleum. Curtailment of GR-S production enabled the Government greatly to reduce the use of high-cost industrial alcohol for butadiene production, and steps also were taken after the end of the war to shut down three small refinery conversion plants which utilized naphtha feedstock and produced butadiene at relatively high costs. By the end of the year the apparent rubber requirements no longer necessitated the use of alcohol butadiene and no further production from alcohol or from the three high-cost petroleum naphtha plants was anticipated.

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*1945 Natural Rubber Activities*

Imports of natural rubber during 1945 totaled 135,672 long tons, obtained by Rubber Development Corporation which was set up to procure rubber from sources still available during the war and to encourage the development of natural rubber growing in foreign countries. All rubber so obtained was purchased by Rubber Reserve to facilitate its distribution to the rubber products manufacturing industry. Of the total imported in 1945, 105,429 long tons were consumed in the United States, 6,743 long tons were re-exported, and the balance served to increase natural rubber inventories from the low of 93,650 long tons at the beginning of the year to 118,715 long tons at the end of the year. About 40 percent of the rubber imported came from Ceylon, 25 percent from Latin American republics, 15 percent from Liberia and the rest from miscellaneous sources, principally Africa.

The first postwar shipment of natural rubber from liberated areas of the Far East, approximately 8,000 tons, arrived in the United States on December 22, 1945. Other shipments were afloat at the end of the year, taken from Far Eastern stocks recovered after the capitulation of Japan. Political unrest, labor shortages, and many other difficulties inherent in the rehabilitation of the liberated areas have caused delay in the production of new rubber.

*Inter-Agency Policy Committee on Rubber*

Conditions in the world's rubber trade, experiences during the war in obtaining natural rubber, and creation of the synthetic rubber industry, have clearly indicated the need for establishment of a United States rubber policy. On September 7, 1945, the Director of the Office of War Mobilization and Reconversion announced the formation of an inter-agency policy committee on rubber with Mr. William L. Batt representing him as chairman. The agencies represented, in addition to the Office of War Mobilization and Reconversion, were the Department of State, Department of Justice, Surplus Property Administration, Reconstruction Finance Corporation, War Department, Navy Department and the Foreign Economic Administration. The representation of the latter was later taken over by the Rubber Development Corporation. The committee was established to survey the programs, plans and problems of federal agencies concerned with natural, synthetic and reclaimed rubber and was charged with the responsibility of formulating Government policies bearing upon the future of the rubber program. A policy decision on surplus plant disposal is now of prime importance, as is the coordination of policy throughout the various branches of the Government.

*International Rubber Study Group*

Rubber Reserve was called upon during the year to participate in conferences of the International Rubber Study Group set up by the United States, United Kingdom, The Netherlands and France to explore future production and prices of world rubber. Participation in these conferences contributed to the accuracy of the estimates of United States synthetic rubber requirements.

*Research Programs*

Approximately \$3,600,000 was spent for research and development projects in 1945 under the general supervision of Rubber Reserve. Results were made available to parties participating in Rubber Reserve-sponsored agreements which provide for exchange of technical information. Contributions made during the year led to continued improvement of synthetic rubber and to increased plant efficiencies.

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*Quality of Products*

The overall average quality of synthetic rubber produced in Government plants was raised to higher levels. Improvement in the quality of finished rubber products, however, was still more marked. The average synthetic rubber tire of passenger-car size now is regarded as the equal in performance of the average prewar natural rubber tire. Similar marked improvement has been obtained in the performance characteristics of heavy duty tires which contain substantial percentages of synthetic rubber. The use of GR-I in the manufacture of inner tubes and other products where air-retention properties are important has developed rapidly, and the synthetic product is generally regarded as superior in many respects to the natural rubber product.

*Relationship to Aviation Gasoline Program*

During the first half of 1945, Rubber Reserve contributed to the overall war effort by arranging for diversion of petroleum feedstocks from the synthetic rubber program to the manufacture of aviation gasoline. In addition, ethylbenzene and cumene, which are essential high octane gasoline blending agents, were produced in the program's styrene plants. This diversion of petroleum feedstocks was terminated at the end of May 1945, and the manufacture of high octane blending stocks was terminated at the end of August, coincident with the decreased demand for high octane gasoline by the Armed Services.

*Cost of Production*

The very marked reduction in the cost of producing GR-S in the last half of 1945 was primarily the result of decreased usage of high-cost industrial alcohol as a raw material for butadiene. At the close of the year over-all production costs, inclusive of plant amortization, had been reduced to a level approximately equivalent to the selling prices established in agreement with OPA, and it is indicated that further reductions in cost can be anticipated. Costs of production of the three principal synthetic rubbers, exclusive of amortization, interest and Washington office expense, are shown in tables in the body of the report. At the end of 1945, GR-S was being produced at an out-of-pocket cost of about 16 cents a pound. During the year GR-I was produced at an average cost of 16.3 cents per pound. The cost of GR-M was brought down to approximately 19 cents a pound, but increased thereafter as a result of curtailed schedules. These costs should not be compared directly with the base price of natural rubber, but may be taken as an indication of the relationship between the cost of synthetic and natural rubber.

*Cooperation of Industry*

The continued success of the Government rubber program reflects the excellent cooperation of the companies participating in the operation of the Government's plants. The year's results fully justified the reliance placed upon such companies.

*Future Program*

At the end of 1945, estimates indicated that Rubber Reserve would be called upon to produce approximately 600,000 long tons of GR-S, 64,000 long tons of GR-I and 30,000 long tons of GR-M—a total of 694,000 long tons of synthetic rubber—in 1946. It was recognized that such estimates would be subject to substantial variation, depending upon the availability of natural rubber, the consumption rate of the manufacturing industry, and requirements of foreign countries for American-made synthetic rubber. It appeared that, in planning a future program, it would be unwise

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to assume natural rubber received during the year 1946 would exceed 250,000 long tons. Rubber Reserve maintains its plants and, subject to allocation by the proper authorities, its feedstock supplies, in such condition as to meet all probable demands for synthetic rubber during the coming year. Such production will be undertaken in the most economical manner consistent with demand.

At the beginning of 1946, ownership and control of the synthetic rubber plants remains in Government and, in addition, the Government is the sole purchaser and distributor of natural rubber. Pending determination of a general policy with regard to rubber, it is apparent that the program will continue to be a Government responsibility.

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## SECTION II—THE RUBBER PROGRAM

A significant development of the year 1945 in relation to the United States rubber program was the enforced focussing of attention on the necessity for a new and coordinated national rubber policy. This was the inevitable result of the experience of the war plus the many problems arising with the return of peace from the existence of a gigantic war-born synthetic rubber industry, a new and serious factor influencing every aspect of both the national and international rubber economies.

That this situation would become urgent with the cessation of hostilities had been foreseen far in advance, and its consideration had engaged many of the best minds in Government and industry both here and abroad. Consequently, both Rubber Reserve Company, which was responsible for the United States supply and distribution of rubber during the prewar and war period, and its successor, the Reconstruction Finance Corporation, Office of Rubber Reserve, were prepared to provide statistical, technical and economic data to aid in the solution of the problems raised.

### A. Rubber Reserve Organization

As one of the several measures of the national defense program, Congress on June 25, 1940, amended the Reconstruction Finance Corporation Act so as to authorize RFC to create corporations to acquire "strategic and critical materials" as defined by the President of the United States.

Three days later, on June 28, 1940, President Roosevelt designated rubber a strategic and critical material and on the same date Reconstruction Finance Corporation established Rubber Reserve Company. The company immediately began purchasing rubber in the Far Eastern market. In June 1941 it became the sole importer of natural rubber for the entire country and, in September 1941, the sole distributor of natural rubber to the rubber products manufacturing industry.

Although steps toward the creation of a synthetic rubber industry had been taken as early as 1940, it was the outbreak of war which shifted the emphasis abruptly from natural to synthetic rubber, greatly expanding and complicating the functions of Rubber Reserve Company and forcing it to concentrate on synthetic production. Operations of the enemy in the Far East swiftly cut off the United Nations from sources of ninety percent of the world's supply of natural rubber and these sources remained in enemy hands or within the zone of enemy operations throughout the war. Despite the vital and interesting problems of synthetic production, however, Rubber Reserve Company continued to distribute all the available supply of both natural and synthetic rubber for the United States and the central distribution system set up in September 1941 has been maintained to the present date by the Office of Rubber Reserve. This system has been implemented by rubber consumption regulations issued by the War Production Board and by its successor, the Civilian Production Administration.

Procurement of natural rubber, necessary for some applications in product fabrication, remained a problem throughout the war and, on February 20, 1943, a separate agency, Rubber Development Corporation, was established specifically to develop and procure natural rubber from sources outside the continental United States. To maintain orderly distribution, essentially all natural rubber so obtained was purchased from Rubber Development Corporation by Rubber Reserve Company and was allocated to industry on the basis of war needs and the total available supply.

Because of organizational changes required by progress of the war, Rubber Development Corporation and those functions, powers, duties, outstanding contracts, assets and obligations of RFC and Rubber Reserve Company, specifically relating to development and procurement of natural rubber in foreign countries, were transferred

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by Executive Order on July 15, 1943, to the Office of Economic Warfare. A second Executive Order, on September 25, 1943, transferred Rubber Development Corporation and the same functions, powers and duties to the Foreign Economic Administration, as a separate entity under direct control of the Administrator. Finally, on September 27, 1945, a third Executive Order transferred Rubber Development Corporation back to RFC, where it was established as a separate subsidiary. Throughout these changes the relationship between Rubber Development Corporation and Rubber Reserve Company, and later, between Rubber Development and the Office of Rubber Reserve, has remained unaltered.

Rubber Reserve Company was dissolved as of June 30, 1945, pursuant to Public Law 109 (79th Congress) and its functions, assets and liabilities were transferred to RFC. To carry out such of those functions as still were essential—which means, in brief, Government ownership and Government operation of the rubber program—RFC established its Office of Rubber Reserve on July 1, 1945. This report, for the calendar year 1945, covers activities, therefore, of both Rubber Reserve Company and the RFC, Office of Rubber Reserve.

In carrying out the Company's original functions—the purchasing and stockpiling of natural rubber—as well as in directing the United States synthetic rubber program, and distributing natural and synthetic rubber, both Rubber Reserve Company and the Office of Rubber Reserve have consulted with other interested agencies of the Government, including the War Production Board, Civilian Production Administration, Petroleum Administration for War, Office of Price Administration, Office of War Mobilization and Reconversion, and the War and Navy Departments. Various recommendations by these agencies have been put into effect. The contractual and operating arrangements, however, always have been the independent responsibility of Rubber Reserve.

Toward the end of the war, and upon consolidation into RFC of various subsidiary corporations and their reestablishment as RFC offices, a program was developed after careful study to transfer responsibility for the administration of the synthetic rubber plant properties to the Office of Rubber Reserve. The plant construction program had been carried out under supervision of Defense Plant Corporation (reestablished as the Office of Defense Plants) and title to the properties rested in that corporation. Transfer of responsibility appeared desirable to reduce personnel, simplify reporting and organizational details, and to centralize control over capital expenditures and accounting procedures. This transfer was effected on December 31, 1945.

#### *B. Inter-Agency Policy Committee on Rubber*

As stated at the outset, reconversion problems and the experience of the war years indicated clearly the need for a coordinated national rubber policy. On September 7, 1945, Mr. John W. Snyder, Director of the Office of War Mobilization and Reconversion, announced the formation of an Inter-Agency Policy Committee on Rubber and appointed Mr. William L. Batt to represent him as Chairman. The Government agencies represented in addition to OWMR were the following:

- Department of State
- Surplus Property Administration
- War Department
- Department of Justice
- Navy Department
- Reconstruction Finance Corporation (Rubber Reserve)
- Foreign Economic Administration (Rubber Development Corporation)

Since the formation of the Committee, the Foreign Economic Administration has ceased to exist, its remaining functions having been transferred to other agencies

of the Government by Executive Order on September 27, 1945. However, Rubber Development Corporation, which was an independent entity under supervision of the FEA Administrator, was continued as a subsidiary of RFC, and the Committee representation formerly assigned to FEA has, therefore, been exercised by representatives of the Corporation.

The Committee was instructed to survey all programs, plans and problems of Federal agencies concerned with natural, synthetic or reclaimed rubber, and to assemble the requisite statistical, technical and economic data necessary for the formulation of a coordinated national policy on rubber. It was further charged with the duty of making appropriate recommendations to OWMR on matters requiring action by the Director or by the President or the Congress of the United States. The specific terms of reference were as follows:

The Committee shall survey plans and programs of the agencies for

1. Maintenance of a synthetic rubber industry.
2. Maintenance of standby rubber plants.
3. Disposal of surplus rubber plants.
4. Encouragement of rubber research and development.
5. Establishment of a strategic stockpile of rubber.
6. Development of wild and cultivated rubber in Latin America.
7. Establishment and maintenance of a mutually advantageous program for the importation of natural rubber from the Far East.

The Committee first met on September 17, 1945, and has since met at frequent intervals. A preliminary report was issued on February 19, 1946, and the drafting of a final report to be issued soon after mid-1946 now is under way.

The Office of Rubber Reserve has participated actively in the work of the Committee, placing its records and the services of personnel at the disposal of the Chairman. The policies to be established obviously will influence the future operation of the synthetic rubber program by Rubber Reserve. A decision on policy to be followed in disposal of synthetic rubber plants is of prime importance. Plant disposal problems are complicated by the necessity to produce sufficient synthetic rubber to meet requirements of the rubber products manufacturing industry, which is in turn essential to the operation of nearly every segment of American industry. During 1946 manufacture of synthetic rubber will undoubtedly continue at a very substantial level and plant disposal must therefore be consistent with the needs of production, both in relation to costs and quantities.

#### *C. International Rubber Study Group*

World production and distribution of rubber have presented many problems in the past, and the current shortage of natural rubber is a subject of international concern. The history of the rubber-growing industry presents a picture of periods of surplus and shortage accompanied by widely fluctuating prices. Many attempts have been made to stabilize the rubber market through adoption of various control schemes.

While the present short supply of natural rubber may be expected to continue during the early postwar years, a surplus of potential production capacity may be anticipated after rehabilitation of Far Eastern producing areas. The war-born synthetic rubber industry in the United States is an influencing factor in this potential postwar surplus capacity and the policy of the United States Government in the development of the new industry is of vital importance to the Governments of those areas which produce natural rubber.

In recognition of these problems, the Department of State, in August 1944, began discussions with the Governments of the United Kingdom and The Netherlands

produced a total of 36,654 long tons of GR-S and 9,080 long tons of GR-I. Cooperation between the Canadian and United States programs included the exchange of raw materials, chemicals and finished rubber in order to permit the most efficient use of the plant facilities and the raw material supplies of both countries. A substantial contribution to the United States aviation gasoline program was also made through the production of cumene in a portion of the styrene plant.

The operations of the Canadian plants compare very favorably with those in the United States. Product specifications and product quality are substantially the same, and such data as are available indicate production costs to be in the same order of magnitude.

*G. Discussion of German Synthetic Rubber Industry*

Before the war it was generally conceded that Germany possessed greater knowledge than any other country regarding the production of synthetic rubber and it was, therefore, assumed the Germans had processing equipment and techniques in advance of other countries. When it was possible with the end of the war to investigate the wartime operation of the German synthetic rubber industry, the information obtained was of great interest to those concerned in the United States program.

During the war extremely limited supplies of natural rubber were available to Germany, which was forced to rely almost entirely upon synthetic production. Such production, however, did not rise above 109,173 tons, the 1943 figure. In that year the Germans used approximately 144,000 tons of rubber of all types. This would appear to be a small figure in relation to the needs of war and is in part accounted for by the construction of German equipment with a minimum requirement in the use of rubber.

A more detailed discussion of the German industry is given in an appendix to this report.

## SECTION V—PLANT OPERATIONS

A. *Butadiene Plants*

Throughout the history of the synthetic rubber program the rate of GR-S production has been controlled largely by the availability of butadiene. The first Government-owned butadiene plant came into production in January 1943. The small amount of GR-S produced before that time utilized butadiene purchased from private producers.

Production of butadiene from plants using alcohol feedstocks increased rapidly during 1943 and nearly all the butadiene used that year was made from alcohol. Most of the Government plants using petroleum feedstocks were brought into production in 1944, but a diversion of butylene from synthetic rubber production to the aviation gasoline program restricted their output and again the major production was from alcohol.

Production of alcohol butadiene continued at high rates until June 1945, when the diversion of butylenes was stopped and a maximum production from petroleum was again possible. Throughout the remainder of the year GR-S production schedules were steadily reduced as the apparent demand for rubber decreased, and the use of butadiene from high cost alcohol was gradually discontinued. The butadiene being used in the Government program by the end of the year was entirely from petroleum feedstocks, although 39 percent of the total butadiene produced during the whole year was from Government-owned alcohol butadiene plants. The following table gives the percentage of butadiene produced from petroleum, alcohol and private sources during the last four years.

Year	Government Production		Private Production
	From Alcohol	From Petroleum	
1942.....	..	..	100
1943.....	77	17	6
1944.....	64	34	2
1945.....	39	58	3

1. *Alcohol Feedstock*

During 1945 the three alcohol butadiene plants produced a total of 233,371 short tons of new butadiene, and 493 tons of butadiene were recovered from spent recycle butadiene returned from the copolymer plants. During the first five months, capacity operation was maintained to permit the release of petroleum butadiene feedstocks for other war uses. A maximum monthly output of 32,700 tons was realized in March, representing operation at 178 percent of the rated capacity of the plants. With the resumption of normal production by the petroleum butadiene plants in June, the schedules of the alcohol plants were reduced to take advantage of the lower cost of the petroleum product.

Shortly after V-J Day it became apparent that one of the alcohol butadiene plants could be closed. Accordingly, the plant at Louisville, Kentucky, operated by the Carbide and Carbon Chemicals Corporation, was shut down on September 25 and placed in standby condition.

During October GR-S and butadiene requirements were re-examined by Rubber Reserve, and early in November it was decided to place the two remaining alcohol butadiene plants in standby condition, a decision concurred in by the Inter-Agency

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Policy Committee on Rubber. The plant operated by Koppers Company, Inc., at Kobuta, Pennsylvania, was shut down on December 3, and the plant at Institute, West Virginia, operated by the Carbide and Carbon Chemicals Corporation, was shut down on December 13. These plants are available for future production subject to the allocation of alcohol feedstocks.

Before hostilities ended and while these plants were operating at maximum rates, important improvements were made in the alcohol butadiene process and the recovery of by-products was substantially increased. Including credits for the alcohol-equivalent of these by-products, the effective yield of butadiene was increased from 2.3 pounds to 2.6 pounds per gallon of alcohol. Facilities were provided for the recovery of butyl alcohol, one of the war's most critically needed solvents. Other facilities were installed to permit recovery of ethyl ether and ethyl acetate and to permit their conversion to alcohol for use in additional butadiene production. Equipment was installed at Institute and Kobuta for the recovery of ethylene gas from by-product fuel gases. The ethylene recovered was made available to adjacent facilities for the production of styrene. These improvements have resulted in savings of several million dollars per month.

## 2. *Petroleum Feedstocks*

Butadiene produced from petroleum feedstocks during 1945 totaled 342,111 short tons. In addition, 24,207 tons of butadiene were recovered from spent recycle butadiene returned from the copolymer plants. As previously stated, substantial quantities of feedstocks were diverted for use in the aviation gasoline program during the first five months of the year, and consequently the production rate did not reach a peak until June. For the balance of the year production continued at high rates.

The Government-owned petroleum butadiene plants use several different processes and process combinations. Six plants utilize normal butylene as a feedstock, three plants normal butane and five plants petroleum naphthas. Production of butadiene from naphtha feedstocks is, in general, a high cost operation and consequently, when the decision was reached to place the alcohol butadiene plants in standby condition, it was also decided to shut down the three smallest and highest cost naphtha feedstock plants.

The three plants were those at Ingleside, Texas, operated by Humble Oil & Refining Company; at El Dorado, Arkansas, operated by Lion Oil Company, and at Corpus Christi, Texas, operated by Taylor Refining Company. These plants had been converted from existing refinery equipment early in the war in the interest of quick production of butadiene. Their capacity represented only three percent of total productive capacity and they were not intended to be part of a long range synthetic rubber industry. The installations at El Dorado and Corpus Christi did not include butadiene purification facilities, and the crude material produced there was refined elsewhere.

The butylene feedstock plants operated very successfully throughout the year. Substantial improvements in the process resulted from operating experience and the use of new improved catalysts. The largest of these plants, at Port Neches, Texas, operated by the Neches Butane Products Company, reached a peak monthly production of approximately 155 percent of designed capacity. Despite two periods of significantly reduced production, one due to feedstock diversion and one due to labor difficulty, the total production for the year at this plant was above rated output.

The five other butylene feedstock plants made good records. One, at Baytown, Texas, operated by the Humble Oil & Refining Company, was consistently above rated capacity throughout the year. A second, at Baton Rouge, Louisiana, operated by Standard Oil Company of New Jersey, duplicated its 1944 record by producing

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over 120 percent of its rated capacity. A third, at Houston, Texas, operated by Sinclair Rubber Inc., had a production record slightly below rated capacity, but during periods when feedstock was in ample supply reached monthly production rates approximating 125 percent of designed capacity. The Lake Charles, Louisiana, plant, operated by the Cities Service Refining Corporation, had a low production rate during the early part of 1945, but increased its production to approximately rated capacity with the introduction of new and improved catalyst. The plant at Los Angeles, California, operated by a Shell Oil division, is dependent for feedstocks on a near by plant operated by the Southern California Gas Company. Designed rates were exceeded at various times during the year.

The plants producing butadiene from butane feedstocks utilize two processes. The plant at Borger, Texas, operated by the Phillips Petroleum Company, makes use of a process developed by the operator. Although designed production rates were not reached, there was substantial improvement in the performance of this plant during the year. A new and improved catalyst was provided for one section of the plant with a notable improvement in yield. Extensive equipment additions were under construction at the end of the year which, it is contemplated, will bring the output from this plant to a level substantially in excess of its original design.

The other two plants utilizing butane feedstock make use of the Houdry process. They are at Toledo, Ohio, and El Segundo, California, and are operated by the Sun Oil Company and the Standard Oil Company of California, respectively. Mechanical difficulties continued to interrupt operations at both, with the result that the production rates were irregular and substantially below design. The erratic performance of the product purification units at both locations has increased the operational difficulties encountered in the butadiene production units.

In addition to butadiene, the five plants utilizing petroleum naphtha as feedstock produced quantities of butylene, aromatic naphtha and other petroleum products of value to the war effort. Production in three was discontinued at the end of the war because of their high cost. The other two continued to produce throughout the year. Of these, the naphtha cracking plant at Baton Rouge, Louisiana, operated by Standard Oil Company of New Jersey, produced at approximately its designed rating, and in addition to aromatic blending agents, produced materials necessary for the production of butyl rubber. Butadiene is also produced by cracking naphtha in a converted facility operated by the Southern California Gas Company at Los Angeles. This crude butadiene is purified in the facilities operated by Shell near the cracking plant. Operations in this plant were satisfactory and progress was made in the recovery and sale of valuable by-products. Ethylene gas and crude benzene from this plant were made available for use in the production of styrene in a near by Government-owned facility operated by The Dow Chemical Company. Progress in the separation and purification of several other by-products contributed materially to a reduction in the net cost of producing butadiene.

#### *B. Styrene Plants*

Styrene production was limited to the requirements of the GR-S program and totaled 180,106 short tons. In addition, 7,286 short tons were recovered from spent recycle returned from the copolymer plants. The total production represented operations at the designed capacity of the plants. Efficiencies of all plants continued to improve during the year, due in large part to the extensive application in the styrene process of a catalyst, previously found to be active in the dehydrogenation of butylene to butadiene.

In the two plants operated by The Dow Chemical Company at Velasco, Texas, and Los Angeles, California, production capacities approximately twice as great as

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## SECTION X—EXHIBITS

## SCHEDULE

1. Rubber Reserve Natural Rubber Activities.
2. Rubber Reserve Scrap Rubber Activities.
3. Rubber Imports from Program Countries.
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16. Investment in Miscellaneous Projects.
17. Private Synthetic Rubber, Butadiene and Styrene Plants.
18. Total Number of Employees in the Government Synthetic Rubber Plants as of December 31, 1945.

## Schedule 1—Rubber Reserve Natural Rubber Activities

SOLID RUBBER <sup>1</sup> (Long Tons)		
	During 1945 <sup>2</sup>	Total Since Start of Operations <sup>3</sup>
Arrivals.....	139,409	1,050,944
Sales (including pro forma).....	115,543	938,765 <sup>4</sup>
Fire Losses.....		6,044
Shrinkage Loss on Material Sold.....	1,819	7,536
Placed in Inventory.....	22,047	98,590
	<u>139,409</u>	<u>1,050,944</u>
Arrivals since Pearl Harbor.....		664,896

LIQUID LATEX (Long Tons Total Dry Latex Solids)		
	During 1945 <sup>2</sup>	Total Since Start of Operations <sup>3</sup>
Arrivals.....	4,776	26,826
Sales.....	3,955	24,190
Shrinkage.....		77
Placed in Inventory.....	821	2,559
	<u>4,776</u>	<u>26,826</u>

<sup>1</sup>The tonnages shown in this table for arrivals and inventories represent gross weight and no allowance has been made for shrinkage in such figures.

<sup>2</sup>As of December 31, 1945.

<sup>3</sup>Includes 10,000 tons salvaged from fires.

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## Schedule 2—Rubber Reserve Scrap Rubber Activities

SCRAP RUBBER		
	1945 Short Tons*	Total Since Start of Operations—Short Tons*
Purchases.....	None	1,109,857
Sales.....	50,034	970,047
Inventory.....	139,810	139,810

\*As of December 29, 1945.

## Schedule 3—Rubber Imports from Program Countries

Shipping Weights—Long Tons					
	1941	1942	1943	1944	1945
<i>Western Hemisphere, Chiefly Wild Rubber</i>					
Amazon Countries.....	4,779	5,872	12,990	20,399	22,019
Mexico, Guayule.....	4,881	5,548	7,678	6,701	10,040
Central America.....	88	630	2,315	2,286	2,108
Other America.....	1,040	2,441	3,211	3,392	3,244
Salvaged Rubber.....	.....	55	361	328	291
Total American.....	10,788	14,546	26,555	33,106	37,702
<i>Africa, Plantation Rubber</i>					
Liberia.....	7,293	9,897	13,656	15,284	20,315
Total Crude Rubber.....	18,081	24,443	40,211	48,390	58,017
<i>Rubber Content of Tires and Tubes:</i>					
Acquired from Brazil.....	.....	2,765	2,736	2,004	1,082*
	18,081	27,208	42,947	50,394	59,099

\*Through August 1, 1945.

## Schedule 4—Rubber Production in Program Countries

Long Tons					
	1941	1942	1943	1944	1945
<i>Western Hemisphere, Chiefly Wild Rubber:</i>					
Amazon Countries.....	18,223	19,385	24,583	30,684	32,300 <sup>1</sup>
Mexico, Guayule and Other.....	5,312	7,763	8,333	9,363	10,000 <sup>2</sup>
Central America.....	170	867	2,657	2,237	2,300 <sup>1</sup>
Other America.....	2,098	3,759	3,707	4,370	4,200 <sup>1</sup>
Total American.....	25,803	31,774	39,280	46,654	48,800
<i>Africa, Plantation Rubber</i>					
Liberia.....	8,393	12,131	14,415	18,053	19,940 <sup>3</sup>
Total.....	34,196	43,905	53,695	64,707	68,746

<sup>1</sup>December production estimated.<sup>2</sup>Estimated for 12 months.<sup>3</sup>Actual 12 months.

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## Schedule 5—Synthetic Rubber Production in U. S. Government Plants

	1942	1943	1944	1945]	Estimated 1948
<b>GR-S (Butadiene-Styrene Type)</b>					
January.....		640	40,107	69,945	.....
February.....		617	44,022	62,598	.....
March.....		1,792	53,876	69,327	.....
April.....		3,137	56,467	66,754	.....
May.....	20	5,682	56,501	72,310	.....
June.....	162	9,868	62,823	68,543	.....
July.....	219	13,060	60,149	68,355	.....
August.....	235	19,412	56,376	61,393	.....
September.....	253	24,074	54,008	56,356	.....
October.....	308	29,694	57,834	39,190	.....
November.....	359	37,002	61,220	42,125	.....
December.....	595	36,492	65,696	40,783	.....
	<u>2,241</u>	<u>181,470</u>	<u>668,879</u>	<u>717,688</u>	<u>600,000</u>
<b>GR-M (Neoprene)</b> .....	1,350	24,611	47,302	36,332	30,000
<b>GR-I (Butyl)</b> .....	.....	1,781 <sup>1</sup>	13,890	47,868 <sup>1</sup>	64,000
<b>GR-A (Acrylonitrile Type)</b> .....	.....	.....	2,060	33 <sup>2</sup>	.....
<b>GR-P (Polysulfide type)</b> .....	8	750	.....	.....	.....
<b>Total All Synthetics<sup>3</sup></b> .....	<u>3,599</u>	<u>208,612</u>	<u>737,181</u>	<u>801,921</u>	<u>694,000</u>

## Notes:

<sup>1</sup>Includes 408 tons of special polymers in 1943 and 442 tons in 1945.<sup>2</sup>Plant scrap clean up.<sup>3</sup>In addition, plants operated by Polymer Corporation, a Canadian Government agency, produced 2,522 long tons of GR-S in 1943; 32,060 long tons of GR-S, and 2,767 long tons of GR-I in 1944; 36,654 long tons of GR-S, and 9,080 long tons of GR-I in 1945.

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Schedule 6—Natural Synthetic and Reclaimed Rubber Supply and Demand <sup>(1)</sup>

	Long Tons	New Supply	Consumption	Exports	Ending Stocks
<i>Natural Rubber and Latex<sup>a</sup></i>					
1941.....		1,029,007	775,000	5,376	533,344
1942.....		282,653	376,791	10,856	422,714
1943.....		55,329	317,634	20,815	139,594
1944.....		107,834	144,118	9,665	93,650
1945.....		137,237 <sup>b</sup>	105,429	6,743	118,715
<i>GR-S (Butadiene-Styrene Type)</i>					
1941 (Est.).....		227	108	<sup>c</sup>	130
1942.....		3,721	2,579	222	1,050
1943.....		182,259	131,977	20,357	30,975
1944.....		679,949	495,552	99,242	116,130
1945.....		724,859	600,145	70,273	170,571
<i>GR-M (Neoprene Type)</i>					
1941 (Est.).....		5,692	4,463	572	700
1942.....		8,956	6,833	1,037	1,786
1943.....		33,603	26,205	2,769	6,415
1944.....		56,660	46,243	5,093	11,789
1945.....		45,672	42,394	5,314	9,703
<i>GR-I (Butyl Type)</i>					
1941 (Est.).....		<sup>d</sup>	<sup>d</sup>	<sup>d</sup>	<sup>e</sup>
1942.....		23	22	0	4
1943.....		1,373	304	40	1,033
1944.....		20,252	10,763	630	9,892
1945.....		52,376 <sup>b</sup>	43,012	880	18,378
<i>GR-A (Butadiene-Acrylonitrile Type)</i>					
1941 (Est.).....		2,464	1,688	<sup>f</sup>	869
1942.....		9,734	8,217	160	1,772
1943.....		14,487	12,405	709	3,145
1944.....		16,812	14,112	679	5,166
1945.....		7,871	8,029	206	4,802
<i>Total Synthetics<sup>g</sup></i>					
1941 (Est.).....		8,383	6,259	672	1,702
1942.....		22,434	17,651	1,419	4,612
1943.....		231,722	170,891	23,375	41,568
1944.....		773,673	566,670	105,644	142,927
1945.....		830,780	693,580	76,673	203,454
<i>Total Synthetic and Natural Rubber</i>					
1941 (Est.).....		1,037,390	781,259	6,048	535,046
1942.....		305,087	394,442	12,275	427,326
1943.....		287,051	488,525	44,690	181,162
1944.....		881,507	710,783	115,309	236,577
1945.....		968,017	799,009	83,416	322,169
<i>Reclaimed Rubber</i>					
1941.....		274,202	251,231	13,851	41,750
1942.....		286,007	254,820	30,405	42,532
1943.....		310,420	291,082	15,678	46,201
1944.....		260,514	251,083	11,800	43,832
1945.....		238,772	241,036	13,413	28,155
<i>Grand Totals</i>					
1941.....		1,311,592	1,032,490	19,799	576,796
1942.....		591,094	649,262	42,680	469,858
1943.....		597,480	779,607	60,368	227,363
1944.....		1,142,021	961,866	127,109	280,409
1945.....		1,206,789	1,040,045	96,829	350,324

<sup>1</sup>Data are compiled from reports of the Rubber Division, Civilian Production Administration, and include imports.<sup>2</sup>Excludes Polysulfide type rubber.<sup>3</sup>Includes 1,565 long tons due to guayule adjustment—actual new rubber supply 135,672 long tons.<sup>4</sup>Not available.<sup>5</sup>Estimated dry weight; shrinkage not a large factor during 1941 and 1942, and not applied until 1943.<sup>6</sup>Excludes 442 L.T. of special polymers produced in GR-I plants.

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## Schedule 7—Production Record of Copolymer Plants

Location of Plant	Plant Operator	Rated Capacity Long Tons/ Year	Actual Production			
			1942 Long Tons	1943 Long Tons	1944 Long Tons	1945 Long Tons
Akron, Ohio.....	Firestone Tire & Rubber Co.....	30,000	944	24,196	39,389 <sup>1</sup>	30,976 <sup>1</sup>
Lake Charles, La.....	Firestone Tire & Rubber Co.....	60,000	....	5,466	46,326	66,306
Port Neches, Texas...	Firestone Tire & Rubber Co.....	60,000	....	668	50,596	63,505
Louisville, Ky.....	B. F. Goodrich Co.....	60,000	102	29,695	57,952 <sup>2</sup>	62,213
Borger, Texas.....	B. F. Goodrich Co.....	45,000	....	6,735	39,633	48,524
Port Neches, Texas...	B. F. Goodrich Co.....	60,000	....	5,667	50,245	63,430
Akron, Ohio.....	Goodyear Synthetic Rubber Corp.....	30,000	868	17,040	37,158	29,697
Houston, Texas.....	Goodyear Synthetic Rubber Corp.....	60,000	....	1,581	45,569	63,997
Los Angeles, Calif.....	Goodyear Synthetic Rubber Corp.....	60,000	....	7,047	29,305	29,730
Naugatuck, Conn.....	U. S. Rubber Co.....	30,000	327	11,720	27,611 <sup>1</sup>	30,357 <sup>1</sup>
Institute, W. Va.....	U. S. Rubber Co.....	90,000	....	36,816	112,970 <sup>1</sup>	97,845 <sup>1</sup>
Los Angeles, Calif.....	U. S. Rubber Co.....	30,000	....	1,303	21,399	33,805
Baton Rouge, La.....	Copolymer Corp.....	30,000	....	19,741	38,090	32,849
Baytown, Texas.....	General Tire & Rubber Co.....	30,000	....	8,867	37,124 <sup>1</sup>	32,660 <sup>1</sup>
Louisville, Ky.....	National Synthetic Rubber Corp.....	30,000	....	5,428	35,512	31,794
		705,000	2,241	181,470	668,879 <sup>1</sup>	717,688 <sup>1</sup>

## Notes:

<sup>1</sup>Excludes materials blended into the latex.<sup>2</sup>Excludes 2,060 long tons of GR-A (specialty type rubber) produced in the plant at Louisville, Ky., operated by B. F. Goodrich Co.

# **EXHIBIT 3**

## **Report of the Director of Rubber Programs to the War Production Board.**

United States.

Washington, D.C. : United States of America, War Production Board, [1945]

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*Rubber*

UNITED STATES OF AMERICA  
WAR PRODUCTION BOARD  
WASHINGTON, D. C.

*United States Office of War Production*

»«

**REPORT**  
of the  
**DIRECTOR**  
of  
**RUBBER PROGRAMS**  
to the  
**WAR PRODUCTION BOARD**

»«

November 3, 1945



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## WAR PRODUCTION BOARD

WASHINGTON 25, D. C.

November 3, 1945

IN REPLY REFER TO:

HD  
9161  
.452  
61552  
1945  
BUREAU

Dear Mr. Krug:

I am submitting herewith my report as Director of Rubber Programs.

The report speaks for itself. However, in transmitting it to you, I wish to take occasion to speak of the splendid work of the men in the Rubber Bureau and of the fine cooperation rendered to this office and to the Bureau by the rubber industry.

The sudden occurrence of VJ-Day threw into the laps of the Rubber Bureau a tremendous number of problems that required prompt and vigorous action. This action was taken by the men in the Bureau with speed and intelligence. The result was a shift from all-out wartime production to production of peacetime products with a minimum of loss of time and tonnage.

The problems of meshing the rising supply of natural rubber with America's full-grown synthetic rubber industry are tremendous. The same intelligent and vigorous effort on the part of the Rubber Bureau and the same thorough-going cooperation from the rubber industry are required if this meshing is to be done without clashing of the gears.

In conclusion, Mr. Tisdale and I want to take this occasion to tell you how much we appreciated the opportunity of working with you and with the staff of the War Production Board.

Sincerely yours,

R. S. Wilson  
Director  
Rubber Programs.

Mr. J. A. Krug  
Chairman  
War Production Board  
Washington, D. C.



## WAR PRODUCTION BOARD

## Report of the Director of Rubber Programs

## I. INTRODUCTION

Unconditional surrender of Japan to the Armed Forces of the United Nations in August drastically altered many of the major problems and most of the objectives of the rubber manufacturing industry. Therefore, this report deals with the objectives and problems presented while this country was still at war with Japan and the many changes involved in rapid reconversion to peacetime production, whereby this country will be supplied as quickly as possible with the thousands of articles containing rubber on which our present-day civilian economy is based.

In view of the fact that the War Production Board, having accomplished its mission, is to be succeeded by another Government agency—the Civilian Production Administration—it seems proper to include in this report not only the situations that have been dealt with during the past four months, but to incorporate a series of comprehensive charts and a table that will make available in one place statistics which deal with natural rubber consumption and price, synthetic rubbers, reclaimed rubber and tire production.

## II. JULY 1 TO AUGUST 14; VJ-DAY

**A. Cutback in December Military Truck Tire Program:** Following VE-Day, the level of military truck tire requirements was reduced on several occasions. The Rubber Bureau had been adjusting to the level of essential military and civilian requirements. As each adjustment was made, it was studied in relation to the existing and currently authorized new capacity of the industry.

It became apparent that the additional capacity for production of truck tires provided by the December Military Truck Tire Program was not needed in its entirety. While serious shortages in meeting current requirements still existed, particularly in the large-size truck tires, it was clear that, by the time the new plants and expansion would be completed and in production, capacity would far exceed the latest projected requirement level.

A comprehensive study was undertaken, comparing truck tire requirements with existing and potential capacity. It was determined that a reasonable cushion of capacity should be provided over the average level of requirements in order to allow for contingencies. This study indicated that, if the new plants under construction and those other expansion projects requiring the longest time to complete and get into full production were eliminated, retaining only those ex-

pansion projects that would be completed and in production by the early part of 1946, a cushion of 12 per cent of average requirements would be provided. If all expansions were to be carried to completion, the capacity would be 37 per cent in excess of average requirements. Before final recommendations were made as to which projects should remain in the Program, a very careful check was made of the status of each project. In addition to estimated completion dates, the cost per pound of the scheduled production from each expansion project was considered and, based upon these two factors, recommendation was made that certain projects should remain in the Program.

On July 18, 1945, the detailed recommendation for reduction in the December Military Truck Tire Program was discussed with representative officials of the War Production Board and the claimant agencies interested in tires. A decision was reached to reduce the program in the amount of 86 million dollars of the initially authorized cost. This change, together with cancellations previously effected prior to July amounting to 24 million dollars of the initial cost, reduced the December Military Truck Tire Program to an initial cost of 22 million dollars from the original 132 million dollars. Estimates made at the time indicated that the net saving of Government funds might approximate 55 million dollars.

After these cancellations had been effected, there still remained on a tonnage basis an increase of approximately 32 per cent in total truck tire capacity above the industry's declared capacity as of November 1944.

The following table presents the statistical picture on a quarterly tonnage basis:

INDUSTRY TRUCK TIRE CAPACITY—QUARTERLY (BASED ON 75 WORK DAYS)			
[Unit—Pounds]			
Industry, declared November 1944	Maximum, all expansions	Remainder, after July 18 cancellations	Net change, after July 18 cancellations
336, 000, 000	537, 000, 000	445, 000, 000	+32%

Complete cancellation of this Program after VJ-Day reduced the projected 445 million pound capacity. However, capacity will remain in excess of that declared in November 1944, because a certain proportion of the expansion will be completed by industry at its own expense.

**B. Conversion of Truck-Tire Capacity to A-3-b Tires (9.00 thru 11.00 cross section):** During the discussion and the decision to cut back the December Military Truck Tire Program, it was clearly shown that insufficient unit capacity existed to attain the projected requirement level for A-3-b tires, while for other groups of tires, the capacity exceeded requirements. After the program had been reduced, the Rubber Bureau requested the industry to adjust its existing capacity from smaller tires to A-3-b tires. In addition, the companies, still having expansion projects remaining after the cutback, were requested to make the necessary adjustments, so that A-3-b unit production would be possible at the expense of smaller truck tire sizes. This adjustment program was set up just prior to VJ-Day and, had it been put into effect, the industry would have had balanced capacity for the production of the various types of tires against the pre-VJ-Day level for 1946 requirements.

**C. Expediting of Remaining Projects:** After the major cutbacks in the truck tire program were effected, it was possible to readjust the delivery schedules for various types of rubber-processing machinery and equipment, so that the potential completion dates for the expansion projects remaining in the program were considerably advanced. The Rubber Bureau continued a close follow-up of the progress of the remaining projects and continually expedited delivery of needed equipment.

**D. Partial Cutback of Rayon Expansion Program and Reduction in the Level of Carbon Black Program:** The reduced requirement level for tires, which resulted in the cutback of the tire expansion program also meant that the rubber industry did not need as much rayon tire cord or as much carbon black as had been previously forecast. Therefore, it was possible for the Textiles Bureau to cancel certain rayon expansion projects that had been previously authorized, and for the Chemicals Bureau to do likewise for certain planned carbon black expansions.

**E. Work on Balancing Components and Manpower Continued to VJ-Day:** While the reduced level of tire requirements alleviated in a large measure some of the critical situations that had previously developed with respect to components, careful review was continued on the current production level of rayon and cotton tire cord, carbon black, chafer fabrics, rosin and other important components.

During this period, neither tire nor component materials production approached capacity, because of manpower shortages and work stoppages.

The War Production Board, in cooperation with the War Manpower Commission, continued its efforts to recruit additional manpower for the tire plants, tire cord mills, reclaimed rubber plants and other plants producing rubber products. In addition, an effort was maintained to obtain deferment of important workers in industry and to maintain men from the Enlisted Reserve Corps in the tire plants.

### III. AFTER VJ-DAY

*A. Impact of VJ-Day on Industry:* Generally speaking, VJ-Day found the rubber industry capable of converting quickly from the production of military products to peacetime items. There was no need for basic reconversion of equipment and machinery. However, some disruptions occurred, particularly in the plants of the smaller companies due to the sudden termination of military orders. On VJ-Day control still existed on the use of various synthetic rubbers and reclaimed rubber. However, appeals were granted immediately, permitting companies, whose military orders had been canceled, to begin production of civilian items made with reclaim or synthetic rubber, except tube-grade butyl.

*B. Demobilization of Controls on VJ-Day:* During the first few weeks immediately following VJ-Day, it was possible, because of cutbacks in military procurement, to effect the following changes in wartime rubber controls:

(1) The quantitative restrictions on the production of A-5 and A-6 truck tires, farm-implement tires, passenger tires, small truck and passenger tubes and camelback were immediately revoked. This step meant the industry was permitted to produce unlimited quantities of these items.

(2) Complete revocation of all restrictions on the use of reclaimed rubber and the following synthetic rubbers: GR-S, Neoprene (GR-M) and N-Types. This change meant that the industry could produce any kind of product from reclaimed and these synthetic rubbers. Usage control was maintained on natural rubber, natural rubber latex, chlorinated natural rubber and butyl (GR-I).

(3) The supply compared to requirements for farm-implement and tractor tires, as well as industrial tires made it possible to notify the Office of Price Administration that rationing of these tires could be discontinued. Also, because of substantial cutbacks in orders for military rubber footwear, it was possible to recommend lifting of rationing of civilian rubber footwear.

(4) Appendix IV to Rubber Order R-1—the Tire Allotment Plan, which for nearly two years was the mechanism for distribution of truck tires for original equipment, military replacement and civilian replacement, was revoked.

(5) Rubber Order R-1 was completely revised as of September 27, 1945. This confirmed the actions indicated above and also revoked various other controls,

such as production restrictions on golf balls, regrooving of tires, regulations on scrap rubber except segregation of tire parts, etc. This revision eliminated several reporting forms and simplified those to be continued. Butyl was permitted in the production of all tubes 6.50 cross-section and larger. Rayon tire cord was permitted in all tires with the exception of passenger, motorcycle and bicycle. The tire production pattern, which required manufacturers to use their interchangeable facilities and available materials to produce first the larger and more critical size tires, was also revoked, permitting the industry to adjust its productive facilities to meet the civilian demand for the various types and sizes of tires.

*C. Cancellation of Remaining Expansion Program:* Immediately following VJ-Day, the Rubber Bureau withdrew its sponsorship of all uncompleted federally-financed projects for the production of tires, soles and heels, and other rubber products. The recommendation was made, however, that all Reconstruction Finance Corporation plants and facilities producing tires should be continued in operation at least until such time as tire rationing could be lifted. The Bureau also recommended completion of federally-financed facilities for washing of natural rubber. To date work has not been started on the washing projects, since a review is being made as to the amounts of unwashed rubber that may be received and which will require washing in this country during 1946.

The requirements for rayon tire cord and carbon black, needed to support the peacetime production schedule, were determined and presented to the Textiles and Chemicals Bureaus respectively. These lower requirements for these two basic components permitted the Textiles Bureau and the Chemicals Bureau to withdraw sponsorship from all federally-financed projects for the production of high-tensacity rayon.

### IV. PEACETIME PRODUCTION

#### OBJECTIVES

*A. Tires and Tubes:* On August 23, 1945 the Rubber Bureau completed its estimate of tire production on a civilian basis for the fourth quarter 1945 and for the year 1946—Basis VIII. In making this forecast, the Rubber Bureau used a study of civilian replacement requirements that had been prepared during April, 1945 by experts from the rubber industry under auspices of the Rubber Manufacturers Association. This forecast contemplated fulfilling all deferred replacement needs for passenger and truck tires, as defined in the Rubber Manufacturers Association Report, as well as a substantial amount of the estimated inventory deficit by the end of 1946. Original equipment tire requirements were obtained upon the best advice of the Automotive Division. War Production Board and reasonable quantities were estimated for export and military procurement. Based upon this estimated tire production schedule, forward estimates were made of the requirements

for component materials, including natural and synthetic rubbers, reclaimed rubber, rayon and cotton tire cord, carbon black, etc.

The tire manufacturing industry was requested to submit on September 1, 1945, their estimates of 1946 production, by quarter, for purposes of confirming the estimated Basis VIII production schedule. These industry estimates for truck tires, when totaled, were 9% lower on a tonnage basis for the year 1946 than Basis VIII. Because of the close approximation of the estimates of the Rubber Bureau and that of the industry, Basis VIII has been considered as the official schedule for purposes of component material estimates.

Because actual tire production to date has been lower than the Basis VIII forecast for the same period and because it now seems indicated that 1946 production will not be as high as anticipated in Basis VIII, revised estimates have been developed for year 1946.

ESTIMATED PRODUCTION 1946 U. S. A.

Tires	Basis VIII	
	Original 8-23-45	Revised 10-25-45
Truck and bus.....	15,381,000	13,770,000
Passenger and motorcycle.....	66,000,000	66,060,000
Tractor and implement.....	3,275,000	3,803,000
Airplane.....	211,000	182,000
Industrial.....	1,952,000	2,102,000
Bicycle.....	8,000,000	9,114,000

These revised 1946 estimates, with the exception of passenger tires, more closely approximate the industry estimates submitted on September 1, 1945.

At the present time, truck tires and passenger tires are still rationed. Truck and bus tires are rationed in two size categories: namely, large truck tires of 8.25 cross-section and larger and small truck tires of 7.50 cross-section and smaller. The War Production Board and its successor agency, the Civilian Production Administration, being the supply agency for the production of tires, must determine when production of these various categories is sufficient to eliminate rationing safely. The staff of the Rubber Bureau has met on several occasions with representatives of the Office of Price Administration to discuss this subject. Current production is climbing, but has not yet reached the levels previously anticipated. Until production becomes greater, a definite date for ending of rationing cannot be established.

There are certain remaining controls on the production of tires and tubes that will be maintained during the immediate future. Rubber Order R-1 now prohibits the production of white side-wall passenger tires and also makes it illegal to produce more than one grade of truck or passenger tire. The grade now permitted is the so-called "100 level". The basic reason for these two controls is to obtain maximum production by permitting only one specification product to be made. These controls will be revoked immediately upon ending of rationing.

A pending amendment to Rubber Order R-1 permits the use of rayon tire

cord in the manufacture of passenger tires of 6.50 and larger cross-section.

At the present time, butyl may be used only in the manufacture of tubes having a cross-section of 6.50 or larger. Butyl is a highly desirable synthetic for the production of inner tubes. It is possible that this material may replace natural rubber for tubes after all controls are lifted.

The amounts of natural rubber that are permitted in the manufacture of tires and tubes is controlled by Rubber Order R-1. These controls will be maintained and will be relaxed systematically and progressively pursuant to the reconversion policy described below.

It is indicated that most other component materials, other than those described above, are in ample supply to meet the projected tire and tube production schedule for the year 1946. The only possible difficulties that can be foreseen are the small amounts of cotton broad woven textiles required by the tire industry and the relatively small amount of rosin used in compounding.

**B. Other Rubber Products:** Generally speaking, there is ample capacity within the industry for the production of all types of rubber products. Many items, manufacturing of which has been prohibited throughout the war, now become important to our peacetime economy. It is also true that many of these items have not been successfully made with synthetic rubber and that, therefore, it is necessary to consider the use of natural rubber in these as well as in those that have been made throughout the war. Many controls, having been removed on plastics, textiles, etc., the rubber industry is faced with the loss of position, if not allowed proper raw material to produce serviceable items. This situation will be given consideration as more rubber becomes available.

The only remaining controls on production of rubber items, other than tires and tubes, are confined to the amounts of natural rubber and butyl that may be consumed.

The most serious component shortage in this field of general rubber products that threatens orderly reconversion is cotton broad woven fabrics, controlled by WPB Order M-317-a. Production of rubber mechanical goods, footwear, coated materials and other items is being curtailed and, in some instances, threatened by the shortages of cotton textiles. The present controls established in Order M-317-a give preference to customers producing bags, to satisfy certain export requirements and to manufacturers of low-priced clothing. The rubber industry has recommended that the controls established in this order be revoked, permitting equal treatment for all consumers of these cotton fabrics. The Rubber Division of the Civilian Production Administration is preparing factual information on this subject for presentation to the Administrator.

The rubber manufacturing industry, synthetic rubber industry, reclaimed rubber industry are relatively small users of rosin (10-12 per cent). It is recommended that distribution controls over this material be maintained to protect

this small requirement until such time as production of rosin has been increased to somewhat near the prewar levels.

#### V. RECONVERSION TO NATURAL RUBBER

The policy of the Rubber Bureau and its predecessor agencies in converting from the use of natural to synthetic rubber during the war was based on retaining natural rubber in those products, where for quality reasons, synthetic rubber could not be substituted. Conversely, synthetic rubber was used first and in the greatest quantities, in those products where the end product quality was adequate when made of synthetic. In reconverting from the use of synthetic to natural rubber, the same basic policy will be followed in reverse. As more natural rubber becomes available, it will be permitted first in those products where for quality reasons it is required. For example, in the field of tires, greater improvement in tire performance can be obtained by using relatively more natural rubber in truck tires than in passenger tires.

Because of the importance of the use of natural rubber for quality reasons in the production of large truck tires and airplane tires during the war, the tire industry on a wartime basis was consuming approximately 90 per cent of all natural rubber permitted. Historically, the consumption of natural rubber for production of tires has been 70-72 per cent of the total amounts consumed. Using the historical pattern of natural rubber consumption which is surprisingly stable, the Rubber Bureau has calculated the percentage of natural rubber that properly applies to each segment of the rubber industry, such as tires and tubes, mechanical goods, wire and cable, footwear, soles and heels, drug sundries, etc. Each segment of the rubber industry will share in the additional supply of natural rubber in the proportion its particular segment bears to the total.

Within each industry segment, the additional rubber will be permitted in those products, where it is most needed for quality reasons. In this connection, the Rubber Bureau has the advice of approximately seventeen technical consulting committees, representing the various industry segments. In consultation with these committees, a preference pattern is being established within each segment indicating the products in which the industry recommends natural rubber should first be used. *Importance of these technical consulting committees cannot be over-emphasized and it is absolutely essential that they be maintained and permitted to perform the same functions that they have over the past three years.*

This method of reconverting to the use of natural rubber will cover the major-consuming products, but obviously, will not reach all the many and varied products that might be made with natural rubber. As the process of reconversion continues, the industry will progressively use larger percentages of natural rubber. An appeal policy will be established whereby manufacturers of miscellaneous items which do not fall

within the major program, will be permitted to consume rubber in the same relative proportion to their pre-war use as the major-consuming products.

The Technical Staff of the Rubber Bureau is preparing a pattern for reconversion based upon the above policy, which will lay out the steps that can be progressively taken as soon as additional natural rubber becomes available per month. This pattern will be put into effect immediately upon official advice as to rubber availability.

With regards to rubber availability, it is important that a clear-cut channel be established for orderly flow of information, so that advance planning on the use of rubber can be put into effect immediately as rubber actually becomes available. The Rubber Development Corporation of the Reconstruction Finance Corporation has been established as the sole purchasing agent for the United States and through its agents, will know when rubber is actually in transit to this country. The Rubber Committee of the Combined Raw Materials Board will be advised of such shipments and will determine rubber allocation as between countries. The allocation decisions of this Committee will be the official source of information upon which the Rubber Division of the Civilian Production Administration will act in amending its controls.

#### VI. CONTINUING RUBBER ORGANIZATION

The Director of Rubber Programs has reported to the Chairman of the War Production Board. With the abolition of the War Production Board on November 3, 1945, this office will be discontinued. However, Robert S. Wilson will remain as Advisor to W. L. Batt, Chairman of the Interagency Policy Committee on Rubber. George M. Tisdale, who has been Assistant Director of Rubber Programs, will also remain as Advisor to Mr. Batt and will be Chairman of the Combined Raw Materials Board Rubber Committee, responsible for allocation of natural rubber to all consuming countries.

On VJ-Day, August 14, 1945, the Rubber Bureau had 203 employees, 34 of whom were on loan from the industry. Because of the cancellation of the various expansion programs, the revocation of the Tire Allotment Plan and other rubber controls, and the revocation of the overall War Production Board controls, such as the Controlled Materials Plan and certain priority procedures, the Rubber Bureau staff on September 30, 1945 was reduced to 108 persons, 26 of whom were on loan from the industry.

On November 3, 1945, when the Civilian Production Administration replaces the War Production Board, a Rubber Division will be created in the Bureau of Reconversion Operations. The staff of the Rubber Division of the Civilian Production Administration will total 78 persons, 17 of whom will be on loan from the industry. There will be three main organizational units in the Rubber Division. The Technical Operations Branch will be responsible for admin-

isling the Rubber Order R-1 controls as they pertain to the use of natural rubber. This Branch will be staffed with technical experts from the industry, who will work with the various consulting technical committees in recommending the pattern of reconversion to the use of natural rubber. A Production Staff will be responsible for maintaining information on production of tires and other rubber products, and assisting the industry in overcoming any bottlenecks to orderly reconversion. This group will be responsible also for determination of monthly quotas for tire rationing. The Rubber Supply and Statistics Branch will be responsible for the allocation of natural rubber and will also collect and assemble all statistics regarding natural rubber consumption and tire production.

W. J. Sears, who has been directing the activities of the Rubber Bureau since April 1, 1945, as its Deputy Director, will become Director of the Rubber Division. E. D. Kelly, who has been Assistant Director of the Rubber Bureau in Charge of Staff Operations, will become Deputy Director of the Rubber Division. George L. Allison will be Assistant Director for Technical Operations, Carl Gibson Assistant Director for Production and Herbert M. James will be Chief of the Rubber Supply and Statistics Branch.

During the life of the Rubber Bureau of the War Production Board, the rubber industry has responded magnificently in furnishing personnel to assist in the Government program, has cooperated wholeheartedly in furnishing information and supporting the Rubber Bureau in its operation. As retiring Director of Rubber Programs, I can assure you and the Administrator of the Civilian Production Administration that the rubber industry will continue its splendid record of cooperation and will continue to support the Rubber Division in achieving the objectives of the Civilian Production Administration.

#### VII. SUMMARY OF IMPACT OF WAR ON RUBBER INDUSTRY AND ITS RESPONSE

All segments of the rubber manufacturing industry deserve the thanks of a grateful nation for a truly tremendous and complex effort during World War II. The combined technical, scientific and engineering ability within the industry rose to the occasion, helping to develop the absolutely necessary synthetic rubber program. Cooperation with similar technicians of the petroleum, chemical and construction industries made possible a vital new material. In addition, the chemists and physicists of the rubber

industry took this new raw material and developed methods by which synthetic rubbers could be made into useful end-products. Production management of the rubber companies were faced with the largest demands ever encountered. Rubber manufacturing facilities were expanded. As these came into production, new manpower had to be found and trained. The cooperation of labor—its long hours of work, its no-strike pledge and in late 1944, seven-day week in the tire and tube industry, were factors that made all-time high production possible. Success or failure to supply the maximum number of necessary rubber products to win the war quickly was dependent basically on the achievements of labor and industry. The fact that our armies have been victorious in Africa, Europe and the Pacific was brought about at least in part by the tremendous efforts of the rubber manufacturing industry. Although it was necessary to limit the use of almost all rubber products on the homefront and to see that such products as were manufactured went to the most essential uses, the civilian transportation of this country did not break down. There were several pretty close calls, but on each occasion the rubber manufacturing industry put forth greater effort, so that there was no serious delay due to a shortage of rubber products.

#### VIII CHARTS AND TABLE

EXHIBIT A  
WORLD NATURAL RUBBER  
CONSUMPTION  
YEARLY

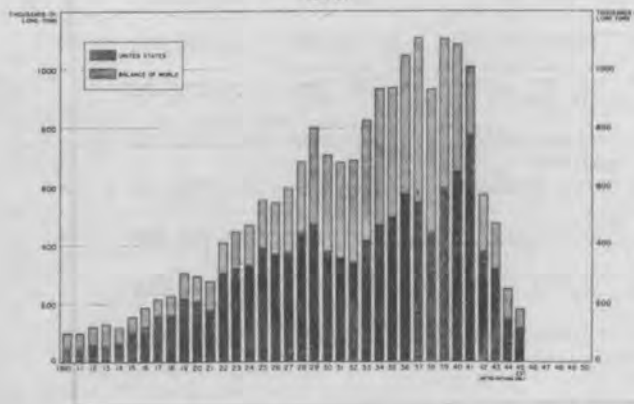


EXHIBIT B  
NATURAL RUBBER PRICES  
RIBBED SMOKED SHEETS  
N.Y. SPOT PRICE



EXHIBIT C  
RUBBER CONSUMPTION IN THE U.S.A.  
MONTHLY

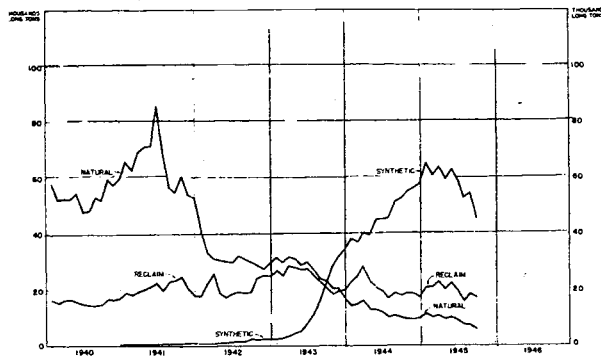


EXHIBIT D  
PERCENT SYNTHETIC RUBBER CONSUMPTION  
OF  
TOTAL NATURAL & SYNTHETIC - U.S.A.

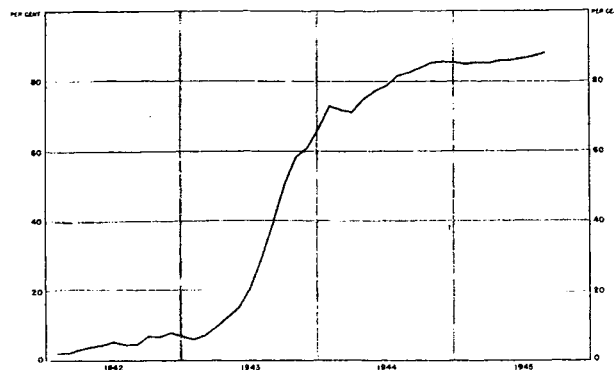


EXHIBIT E

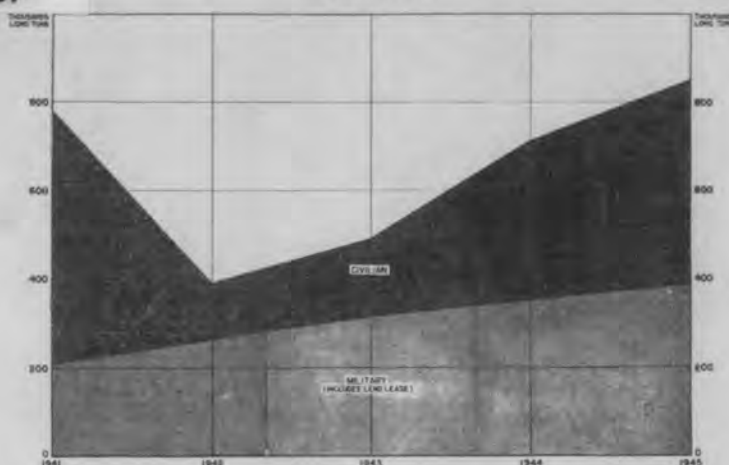
U.S.A. PRODUCTION

<u>Year</u>	<u>Truck &amp; Bus Tires</u>	<u>Passenger Car Tires</u>	<u>Tractor &amp; Impl. Tires</u>	<u>Airplane Tires</u>	<u>Camelback Pounds</u>
1939	7,680,000	49,933,000	1,100,000 *	33,000	54,411,000 *
1940	8,221,000	50,965,000	1,500,000 *	75,000	49,488,000 *
1941	11,148,000	50,392,000	2,100,000 *	170,000	75,920,000 *
1942	13,033,000	2,461,000	430,000 *	625,000	106,082,000 *
1943	12,927,000	7,628,000	914,000 *	1,033,000	236,715,000 *
1944	14,713,000	18,793,000	2,105,000	1,417,000	353,744,000
1945 Est.	16,600,000	28,200,000	2,600,000	800,000	321,000,000
1946 Est.	13,760,000	66,000,000	3,800,000	182,000	263,000,000
* Shipments					

2-7316



EXHIBIT F  
U.S.A. NATURAL AND SYNTHETIC RUBBER CONSUMPTION  
MILITARY VS CIVILIAN  
YEARLY ESTIMATE



### IX. CONCLUSION

Now that our arms are victorious over our enemies, the rubber manufacturing industry is faced with new responsibilities. Tires, tubes and thousands of other rubber products must be produced to supply a nation that has been starved of rubber goods. There is a tremendous pent-up demand for products made of rubber for civilian transportation, industrial use and household consumption. These demands will keep even the greatly expanded facilities of the rubber manufacturing industry busy for many months to come.

A summary review of rubber during the war period will show:

(1) Ninety per cent of our natural rubber supply was cut off in February, 1942.

(2) We had on hand or afloat at that time approximately 650,000 tons of natural rubber.

(3) This stockpile, conserved by stringent measures, gave us two years in which to develop a substitute for natural rubber.

(4) In those two years an entirely new source of supply of rubber was created—the American synthetic rubber industry—capable of producing 1,200,000 tons of synthetic rubber annually.

(5) In 1941, America's rubber products were made of 99% natural rubber and 1% synthetic rubber; in 1945, America's rubber products were made of 15% natural rubber and 85% synthetic.

(6) In the third year after the loss of Singapore, our total rubber consumption (natural and synthetic) rose to a peak higher than any previous year in our history.

(7) While the synthetic rubber polymer is not in all respects the equal of natural rubber as yet, it did the job and did it well.

(8) Broadly speaking, no vehicle, military or essential civilian, stood still for lack of tires and no military operation was delayed because rubber equipment was lacking.

These simple, unembellished facts tell more strikingly than pages of comment and statistics how America rose to over-

come the most frightening industrial aspect of the sudden Japanese attack.

Great credit must be given to the Rubber Survey Committee (Messrs. Baruch, Conant and Compton) for having stressed the essentiality of rubber and for having pointed the way by which this nation could achieve the development of an adequate supply of rubber.

Today, we are faced with the problem of meshing our new synthetic rubber industry with new supplies of Far East plantation rubber which will be available in the months ahead. This is one of the momentous problems that confronts the nation. Development of the groundwork for deciding these problems is in the good hands of the Interagency Policy Committee on Rubber established by the Office of War Mobilization and Reconversion.

R. S. WILSON,  
Director, Rubber Programs.

GEORGE M. TISDALE,  
Assistant Director, Rubber Programs.

NOVEMBER 3, 1945.

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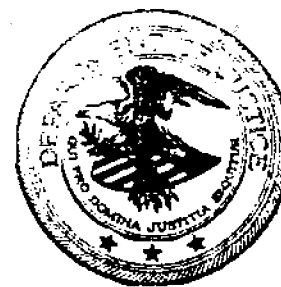
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# **EXHIBIT 4**

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FIRST REPORT  
OF THE  
ATTORNEY GENERAL

ON  
COMPETITION IN THE SYNTHETIC  
RUBBER INDUSTRY



UNIVERSITY OF CALIFORNIA  
LOS ANGELES

MAY 1, 1956

JUN 28 1956

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MISC-00014917

**LETTER OF TRANSMITTAL**

MAY 1, 1956.

The PRESIDENT.

The PRESIDENT OF THE SENATE.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

MY DEAR SIRs: I have the honor to transmit this First Report of the Attorney General on Competition in the Synthetic Rubber Industry for the period May 1 through December 31, 1955, which covers the first 8 months of the industry's operation under private enterprise. It is submitted in accordance with the request of the Senate Banking and Currency Committee set forth in Senate Report No. 117, 84th Congress, 1st session, which stated:

\* \* \* the committee requests the Department of Justice to report to the Congress each year for the first 10 years following sale of the facilities. These reports should state the Attorney General's findings and opinions with respect to the competition, or lack of competition, existing in the synthetic rubber industry during the year of the report.

The information contained in this report is predicated upon an investigation of the synthetic rubber industry conducted by this Department which embraced the 15 producers of synthetic rubber and its components who acquired facilities under the disposal program as well as a representative sample of small business enterprises engaged in the fabrication of rubber products.

Respectfully,



*Attorney General.*

I

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## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

### I. HISTORICAL BACKGROUND

One of the truly amazing industrial achievements of World War II was the rapid development of the American synthetic rubber industry. From a meager production of 8,000 long tons of synthetic rubber in 1941, the fledgling industry had grown, by the end of 1944, to an industrial mechanism capable of producing more than a million long tons of rubber annually.<sup>1</sup> In the short span of 3 years the Government, under the stress of a war emergency, lifted synthetic rubber technology from the test tube of the laboratory and transformed it into a full-blown industry. This transition from laboratory to commercial production was an industrial and scientific achievement, the result of the joint efforts of Government and private industry. Under normal circumstances this transition would probably have required several decades or more to accomplish.

#### *Description of the industry*

Under the impetus of the war emergency the Government constructed plants to produce three types of synthetic rubber: GR-S, butyl and neoprene. GR-S, a general purpose rubber, was designed to replace natural rubber for large volume uses, such as the manufacture of tires. It is produced by the combination of two chemicals, butadiene and styrene, through a process known as copolymerization. Butadiene may be made from either petroleum or from alcohol, and styrene is produced from benzene and ethylene. In addition to building copolymer plants for the production of GR-S, the Government built facilities to produce butadiene and styrene, as private capacity for the production of both of these chemicals was negligible.<sup>2</sup>

The industry, initially comprised of 51 plants representing a capital outlay by the Government of almost \$700 million, was operated for the account of the Government by companies in the rubber, chemical, and petroleum industries on a fee basis.<sup>3</sup> Between the termination of hostilities in World War II and the enactment of the Rubber Producing Facilities Disposal Act of 1953,<sup>4</sup> the Government disposed of 18 of the original 51 plants.<sup>5</sup> At the time of disposal in 1955 the Government's holdings in the

<sup>1</sup> Rubber, First and Second Reports of the Inter-Agency Policy Committee on Rubber, July 22 1946, p. 16.

<sup>2</sup> Program for Disposal to Private Industry of Government-Owned Rubber-Producing Facilities, Reconstruction Finance Corporation, March 1, 1953, p. 2.

<sup>3</sup> *Id.*

<sup>4</sup> Act of August 7, 1953, ch. 338, 67 Stat. 408, 50 U.S.C. App. Sec. 1941, et seq. (hereafter referred to as the Disposal Act).

<sup>5</sup> Synthetic Rubber Recommendations of the President, January 1950, Table C-11, p. 102.

## 2 COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

industry consisted of 29 plants capable of producing GR-S, butyl, butadiene, styrene, and other essential ingredients of GR-S.<sup>6</sup>

*Development of a disposal policy*

At the close of World War II the need for a national rubber policy became apparent. In September 1945, the Interagency Policy Committee on Rubber was established by the Director of the Office of War Mobilization and Reconversion to formulate such policy. The Committee's recommendations were submitted in July 1946 in a report to the President and the Congress. The Committee urged, among other things, continued production and mandatory use of synthetic rubber to assure a minimum level of consumption and the immediate initiation of disposal negotiations to achieve private operation of the synthetic rubber industry in accordance with a disposal plan set forth in the report.<sup>7</sup>

Failure of the Congress to agree on legislation to implement the several recommendations of the Interagency Committee on Rubber, prior to the expiration of the Second War Powers Act on March 31, 1947, necessitated the extension of certain wartime rubber powers for 1 year by joint resolution<sup>8</sup> to permit further study. The Rubber Act of 1948,<sup>9</sup> in addition, declared that it was the policy of the Congress to establish a free competitive privately owned synthetic rubber industry but postponed disposal of a major part of the Government-owned facilities.<sup>10</sup> On April 1, 1949, the Reconstruction Finance Corporation, in compliance with a requirement of the Rubber Act of 1948, submitted a report to the President which was designed to assist him in recommending disposal legislation to the Congress as required by the statute.<sup>11</sup>

Pursuant to this statutory requirement, the President, on January 14, 1950, submitted to the Congress his recommendations for maintaining the synthetic rubber industry in the United States and for the industry's disposal to private enterprise. Among other things the President recommended that he be given authority to dispose of the plants and that they be offered for sale as soon as possible with certain limitations upon their disposal. These limitations included safeguards with respect to the national security and to the development of a free, competitive synthetic rubber industry.<sup>12</sup> The Congress failed to adopt the President's recommendations that disposal be undertaken in 1950 because of unsettled world conditions. Instead the Congress extended the Rubber Act of 1948 for a period of 3 additional years.<sup>13</sup>

Section 9 (a) of the Rubber Act of 1948, as amended, and Executive Order 9942 of April 1, 1948, delegated the responsibility of formulating a rubber facilities disposal program to the Reconstruction Finance Corporation. Accordingly, on March 1, 1953, the Reconstruction Finance Corporation submitted to the President

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 3

and to the Congress its report recommending a proposed program for disposal.<sup>14</sup> This report recommended legislation to effect immediate disposal and laid down a set of principles to be followed and the objectives to be achieved by disposal. On the basis of these recommendations the Congress enacted the Disposal Act which became law on August 7, 1953.

*The Disposal Act of 1953 and its implementation*

The Disposal Act authorized the disposal of the Government-owned synthetic rubber facilities in a manner consistent with the development of a free, competitive synthetic rubber industry. It established among other things the criteria for disposal, including the requirement that disposal assure small business enterprises a fair share of synthetic rubber at fair prices and that no producer be endowed with unreasonable control over the production of synthetic rubber or its components.<sup>15</sup> It required the Disposal Commission to consult and advise with the Attorney General with respect to the development of a free competitive synthetic rubber industry.<sup>16</sup>

On January 24, 1955, the Disposal Commission submitted its recommended disposal program to the Congress in accordance with section 9 (a) of the Disposal Act.<sup>17</sup> This report contained the opinion of the Attorney General and his findings approving the recommended program. After extensive hearings before the Senate Banking and Currency Committee and the House Armed Services Committee, the Commission's program was approved by the Congress on March 23, 1955.<sup>18</sup> The program approved by the Congress authorized the sale of all the Government-owned rubber producing facilities except the Baytown, Tex., copolymer plant, the Institute, W. Va., copolymer plant, the Louisville, Ky., butadiene plant, and certain miscellaneous equipment and facilities.<sup>19</sup>

Section 8 of the Disposal Act required all unsold facilities to be placed in standby for a period of 3 years except pursuant to further act of Congress. Accordingly, on March 31, 1955, the Congress enacted Public Law 19<sup>20</sup> amending the Disposal Act and authorizing the disposal of the Baytown, Tex., copolymer plant. The Commission's recommendations for the disposal of this plant were submitted to the Congress on June 10, 1955.<sup>21</sup>

On August 9, 1955, Congress enacted Public Law 336<sup>22</sup> amending the Disposal Act and authorizing the disposal of the Institute, W. Va., copolymer plant. The Commission's recommendations for the disposal of this plant were submitted in a report to the Congress on January 12, 1956.<sup>23</sup>

<sup>6</sup> RFC Report, 1953, *supra*, note 2.

<sup>7</sup> Disposal Act, sec. 17 (1) and (3).

<sup>8</sup> *Id.*, secs. 3 (c), 3 (d), and 9 (a) (4).

<sup>9</sup> Report to the Congress, Rubber Producing Facilities Disposal Commission, January 24, 1955.

<sup>10</sup> Congressional Record, 84th Cong., March 23, 1955, vol. 101, p. 2985.

<sup>11</sup> The Louisville plant, however, was leased to Publicker Industries, Inc., for a period of 3 years on March 25, 1955.

<sup>12</sup> Act of March 31, 1955, ch. 19, 69 Stat. 15, 50 U.S.C. App. Sec. 1941 w.

<sup>13</sup> Report to Congress, Rubber Producing Facilities Disposal Commission, June 10, 1955.

<sup>14</sup> Act of August 9, 1953, ch. 696, 69 Stat. 628, 50 U.S.C. App. Sec. 1941 x.

<sup>15</sup> Report to Congress, Rubber Producing Facilities Disposal Commission, January 12, 1956.

<sup>6</sup> RFC Report, 1953, p. 2. *Supra*, note 2.

<sup>7</sup> Interagency Committee Report, *supra*, note 1.

<sup>8</sup> Act of March 29, 1947, ch. 24, 61 Stat. 24.

<sup>9</sup> Act of March 31, 1948, ch. 166, 62 Stat. 102, 50 U.S.C. App. Sec. 1921, et seq.

<sup>10</sup> President's Report of 1950, *supra*, note 5, p. 27.

<sup>11</sup> Report with Respect to the Development of a Program for Disposal of the Government-Owned Rubber-Producing Facilities, Reconstruction Finance Corporation, April 1, 1949.

<sup>12</sup> President's Report of 1950, *supra*, note 5.

<sup>13</sup> Act of June 24, 1950, ch. 367, 64 Stat. 256, H. Rept. No. 1773, 81st Cong.

## 4 COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

*Purpose and scope of this report*

This report is submitted in accordance with a request of the Senate Committee on Banking and Currency set forth in its report to the Senate on the Disposal Commission's recommended disposal program.<sup>24</sup> During the hearings on the disposal program some members of the Banking and Currency Committee expressed considerable concern that the bulk of the Government's rubber-producing facilities were being sold to the largest rubber and oil companies whose antitrust records were not unblemished.<sup>25</sup> Despite assurances that enforcement of the antitrust laws normally must be relied upon to prevent the plant purchasers from engaging in anticompetitive practices after acquisition of the plants, the committee appeared to be searching for more positive assurance that surveillance over the industry would be maintained by the Government after the transfer of the plants to private ownership. In view of this concern the committee in its report to the Senate stated:

In order that there be no doubt in this regard [that the Department of Justice would maintain its vigilance in enforcing the antitrust laws], however, the committee requests the Department of Justice to report to the Congress each year for the first 10 years following sale of the facilities.<sup>26</sup>

The two principal objectives of this report are to determine whether, in the opinion of the Attorney General, (a) competition existed in the synthetic rubber industry during the first 8 months of private ownership, and (b) small businesses received a fair share of synthetic rubber at fair prices as contemplated by the Disposal Act and the contracts covering the sales of the plants.<sup>27</sup> This accords with the request of the committee that the Attorney General's reports should state his:

\* \* \* findings and opinions with respect to the competition, or lack of competition, existing in the synthetic rubber industry during the year of the report. In commenting upon competition in the synthetic rubber industry, the Attorney General should comment upon the extent to which small businesses are receiving a fair share of the end products at fair prices, as contemplated by Public Law 205 and the sales contracts.<sup>28</sup>

The facts upon which this report is predicated were developed by a comprehensive investigation conducted by this Department covering (a) all producers of synthetic rubber and its component ingredients who acquired facilities under the disposal program, of which there are 15 in number,<sup>29</sup> and (b) a representative sample of rubber fabricators whose size, when measured by volume of sales or number of employees, would appear to place them in the category of small business enterprises in the rubber industry.

<sup>24</sup> S. Rept. No. 117, 84th Cong., 1st sess.

<sup>25</sup> Hearings before a subcommittee of the Senate Committee on Banking and Currency on S. 691, 84th Cong., 1st sess. (1955), pp. 69-89.

<sup>26</sup> S. Rept. No. 117, p. 13, *supra*, note 24.

<sup>27</sup> Sec. 17 (1) of the Disposal Act of 1953 states that "the disposal program be designed best to afford small business enterprises and users, other than the purchaser of a facility, the opportunity to obtain a fair share of the end products of the facilities sold and at fair prices." In addition, each of the contracts of sale covering the GR-S plants provide that the purchaser will make available to small business enterprises a stated tonnage or percentage of the production of the plant.

<sup>28</sup> S. Rept. No. 117, p. 13, *supra*, note 24.

<sup>29</sup> The ownership of the Baytown, Tex., GR-S copolymer plant was transferred July 15, 1955. This report, therefore, covers less than 6 months of this plant's operation under private ownership. The Institute, W. Va., GR-S copolymer plant, which was sold to Goodrich-Gulf Chemicals, Inc., on February 21, 1956, was not operating in 1955 and is not covered by this report.

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 5

## II. COMPETITION IN THE MANUFACTURE AND SALE OF GR-S RUBBER

The privately owned synthetic rubber industry created by the disposal program distributed the ownership of the 23 basic synthetic rubber producing plants among 15 companies. The firms comprising the synthetic rubber industry during the first 8 months of private ownership are listed in Table No. 1:

TABLE NO. 1.—Companies comprising the synthetic rubber industry

A. GR-S COPOLYMER PLANTS	
Company	Plant location
American Synthetic Rubber Corp.-----	Louisville, Ky.
Copolymer Rubber & Chemical Corp.-----	Baton Rouge, La.
The Firestone Tire & Rubber Co.-----	Akron, Ohio.
	Lake Charles, La.
Goodrich-Gulf Chemicals, Inc. <sup>1</sup> -----	Port Neches, Tex.
Goodyear Synthetic Rubber Corp. <sup>2</sup> -----	Akron, Ohio.
	Houston, Tex.
Phillips Chemical Co. <sup>3</sup> -----	Borger, Tex.
Shell Chemical Corp. <sup>4</sup> -----	Los Angeles, Calif.
Texas-U.S. Chemical Co. <sup>5</sup> -----	Port Neches, Tex.
United States Rubber Co.-----	Naugatuck, Conn.
United Rubber & Chemical Co. <sup>6</sup> -----	Baytown, Tex.
B. BUTADIENE PLANTS	
Copolymer Rubber & Chemical Corp.-----	Baton Rouge, La.
Petro-Tex Chemical Corp. <sup>7</sup> -----	Houston, Tex.
Goodrich-Gulf Chemicals, Inc.-----	Port Neches, Tex.
Texas-U.S. Chemical Co.-----	Do.
Humble Oil & Refining Co. <sup>8</sup> -----	Baytown, Tex.
Petroleum Chemicals, Inc. <sup>9</sup> -----	Lake Charles, La.
Phillips Chemical Co.-----	Borger, Tex.
Shell Chemical Corp.-----	Torrance, Calif.
Standard Oil Company of California-----	El Segundo, Calif.
C. BUTYL RUBBER PLANTS	
Esso Standard Oil Co. <sup>10</sup> -----	Baton Rouge, La.
Humble Oil & Refining Co.-----	Baytown, Tex.
D. STYRENE PLANT	
Shell Chemical Corp.-----	Los Angeles, Calif.

<sup>1</sup> 50 percent owned by the B. F. Goodrich Co. and 50 percent by Gulf Oil Corp.

<sup>2</sup> A wholly owned subsidiary of the Goodyear Tire & Rubber Co.

<sup>3</sup> A wholly owned subsidiary of Phillips Petroleum Co.

<sup>4</sup> A wholly owned subsidiary of Shell Oil Co.

<sup>5</sup> 50 percent owned by United States Rubber Co. and 50 percent by The Texas Co.

<sup>6</sup> A wholly owned subsidiary of United Carbon Co.

<sup>7</sup> 50 percent owned by Food Machinery & Chemical Corp. and 50 percent by Tennessee Gas Transmission Co.

<sup>8</sup> Standard Oil Co. (N.J.) owns 87.36 percent of the stock of Humble Oil & Refining Co.

<sup>9</sup> 50 percent owned by Cities Service Co. and 50 percent by Continental Oil Co.

<sup>10</sup> A wholly owned subsidiary of Standard Oil Co. (N.J.).

The transition from a Government monopoly of synthetic rubber production to competitive operation under private ownership was accomplished in 1955 under extremely favorable market conditions.<sup>30</sup> United States consumption of both natural and synthetic rubber set a new high in 1955 of 1.5 million long

<sup>30</sup> Possession of the plants was taken by the purchasers between April 21 and 29, 1955.

## 6 COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

tons, almost 24 percent above 1954 consumption. Synthetic rubber consumption alone in 1955 established a new record of almost 890,000 long tons, representing an increase of about 42 percent above the preceding year. Moreover, the ratio of synthetic rubber consumption to total new rubber consumption rose from 52 percent in 1954 to 59 percent in 1955.<sup>31</sup>

Among the factors responsible for this increase in the consumption of new rubber were (a) the high level of automobile production and its concomitant demand for original equipment tires and tubes, (b) an above average increase in the volume of replacement automobile tire sales, (c) an increase in the demand for industrial rubber products resulting from the higher level of general business activity, and (d) the further growth in the use of sponge and foam rubber products.<sup>32</sup>

The tight world supply of natural rubber in 1955 caused its price in the United States to rise to around 50 cents per pound in December, a sharp uptrend from the 20 cent level in the early months of 1954.<sup>33</sup> The base price of GR-S and butyl rubber held steadily at 23 cents per pound throughout the year.<sup>34</sup> The wide differential between synthetic rubber and natural rubber prices was a strong force in the shift in demand from natural to synthetic rubber. This shift contributed to the GR-S shortage which occurred toward the latter months of 1955 and necessitated the allocation of GR-S production among customers by some producers.

#### *The structure of competition in GR-S*

The relative share of the GR-S market achieved by each of the 10 producers during the period of private ownership, when measured by the traditional yardsticks of capacity, production or sales, yields results very similar to those reflected by the distribution of capacity at the time of disposal. Table No. 2, below, reveals the percentage of the market held by each producer during the survey period.<sup>35</sup>

The Firestone Tire & Rubber Co., with the largest share of capacity at the time of disposal, ranked first during the survey period in GR-S production with 19.1 percent and second in sales with 19.9 percent. Goodyear Synthetic Rubber Corp., the second largest producer in terms of capacity, ranked second in production with 17.7 percent but achieved first place in the industry in sales with 23 percent. The third largest factor in the industry was Goodrich-Gulf Chemicals, Inc., with 12.7 percent of production and 10.3 percent of sales. Rounding out the 5 largest producers were Texas-U. S. Chemical Company and Shell Chemical Corp., with 12 and 10.2 percent of production and 10.4 and 10.6 percent of sales respectively. In the aggregate, the top 5 producers

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 7

accounted for 69.7 percent of capacity, 71.7 percent of production, and 74.2 percent of sales. The remaining 30.3 percent of capacity, 28.3 percent of production, and 25.8 percent of sales was distributed among 5 producers, no one of which had more than 9 percent of capacity, production or sales.

TABLE No. 2.—*Distribution of GR-S capacity, production and sales by company, May–December 1955*

Company	Percent of capacity, May 1, 1955	Percent of production	Percent of sales <sup>1</sup>
American Synthetic Rubber Corp. ....	6.0	6.6	6.3
Copolymer Rubber & Chemical Corp. ....	6.7	6.4	5.6
The Firestone Tire & Rubber Co. ....	17.7	19.1	19.9
Goodrich-Gulf Chemicals, Inc. ....	12.3	12.7	10.3
Goodyear Synthetic Rubber Corp. ....	15.6	17.7	23.0
Phillips Chemical Co. ....	8.6	7.1	8.0
Shell Chemical Corp. ....	12.1	10.2	10.6
Texas-U. S. Chemical Co. ....	12.0	12.0	10.4
United States Rubber Co. ....	3.0	2.6	1.9
United Rubber & Chemical Co. <sup>2</sup> ....	6.0	3.7	5.0
All other <sup>3</sup> ....		1.9	
Total.....	100.0	100.0	100.0

<sup>1</sup> Represents production beginning July 15, 1955, when this company took over the plant.

<sup>2</sup> Government production at Baytown, Tex., May 1 to July 15, 1955.

<sup>3</sup> Domestic sales.

Source: Information furnished to the Department by the producers.

#### *Influence of plant specialization on competition*

While GR-S is the broad designation given to the general purpose rubber produced in the copolymer plants, a number of new types possessing distinctive characteristics have been developed in the course of the industry's evolution. In view of this fact it is of interest to examine the extent of competition in each of the several GR-S categories.

Initially all GR-S was produced at temperatures of 120° F. or above. In the postwar period there was developed and perfected a method of producing GR-S at temperatures of 41° F. or lower, the product of which is known as "cold rubber." Experience has proven that in some applications, particularly in tire treads, cold rubber is superior to natural rubber.<sup>36</sup> The addition of approximately 33 percent by weight of carbon black at the polymerization stage of GR-S production and the addition of 25 to 37.5 percent by weight of mineral oil to GR-S at the latex stage, produces two categories of GR-S, identified as black masterbatch and oil masterbatch types.<sup>37</sup>

The relative importance of each of the principal types of GR-S produced in the survey period is shown in the following table No. 3:

<sup>36</sup> President's Report of 1950, *supra*, note 5, pp. 30–31.

<sup>37</sup> Rubber, Third Annual Report by the Secretary of Commerce, September 24, 1951, pp. 14–15; Rubber Age, vol. 78, February 1956, pp. 748–749.

<sup>31</sup> United States Rubber Statistics, U. S. Department of Commerce, Preliminary, December 1955.

<sup>32</sup> Chemical and Engineering News, vol. 33, July 11, 1955, pp. 2954–2955; Press Release, December 19, 1955, the Rubber Manufacturers Association, Inc.

<sup>33</sup> Rubber Fabricating, Standard & Poor's Industry Surveys, vol. 124, No. 14, sec. 2, April 5, 1956, p. R. 123; also see Chart V.

<sup>34</sup> See Appendix Table II.

<sup>35</sup> The term "survey period" as used throughout this report means the period May through December 1955.

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TABLE NO. 3.—Production of GR-S by types, May-December 1955

Type	Production <sup>1</sup> (long tons)	Percent total production
Regular GR-S <sup>2</sup> .....	139,735	27.4
Cold GR-S <sup>2</sup> .....	211,092	41.4
Cold oil masterbatch.....	115,172	22.6
Cold oil black masterbatch.....	16,201	3.2
Cold and regular black masterbatch.....	27,670	5.4
Total.....	509,870	100.0

<sup>1</sup> GR-S content.<sup>2</sup> Includes latex.

Source: United States Rubber Statistics, U. S. Department of Commerce, Chemical and Rubber Division, January 30, 1956, p. 5.

Under Government ownership all of the GR-S plants were operated as a unified integrated system. Some plants were equipped to produce a limited range of specialized GR-S types, others were capable of producing a diversified range of types. In view of these circumstances it was to be expected that under private ownership the purchasers of the specialized plants might, at least temporarily, be insulated against the competition of a majority of the other producers. The following tabulation (Table No. 4) reveals the relative share of each category of GR-S produced by each producer in the survey period:

TABLE NO. 4.—Percentage distribution of production by company by types of GR-S, May-December 1955

Company	Carbon black masterbatch, cold and regular	Oil black masterbatch, cold	Oil masterbatch, cold	Not masterbatched <sup>1</sup>	
				Cold	Regular
American Synthetic Rubber Corp.				15.9	
Copolymer Chemical & Rubber Corp.			2.7	14.0	
The Firestone Tire & Rubber Co.			19.7	16.4	28.7
Goodrich-Gulf Chemicals, Inc.			9.1	18.5	10.6
Goodyear Synthetic Rubber Corp.			29.3	10.8	24.3
Phillips Chemical Co.	30.0	13.6	7.4	4.4	3.4
Shell Chemical Corp.	9.9	9.1	14.2	8.0	10.5
Texas-U. S. Chemical Co.			17.6	9.3	15.4
United States Rubber Co.				2.7	5.3
United Rubber & Chemical Co.	34.3	61.4			
All other <sup>1</sup>	16.8	15.9			1.8
Total.....	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> Represents production at Baytown, Tex., prior to transfer of the plant to United Rubber & Chemical Co.<sup>2</sup> Includes latex.

Source: Information furnished to the Department by the producers.

The influence of plant specialization upon competition in certain types of GR-S is obvious from the foregoing table. The competition in carbon black masterbatch and oil black masterbatch, which together represented less than 10 percent of total production in the survey period, was confined to three producers, Phillips, Shell, and United Rubber. While Phillips and Shell were sufficiently diversified to compete in the production of other types of GR-S, United Rubber lacked such diversification and did not compete outside its field of specialization.

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*Competition in the production of GR-S latex*

Conspicuous among the rubber products showing spectacular growth in consumption in the postwar decade are latex foam products of all types. The greater use of foam rubber in automobiles, bedding, and upholstery was largely responsible for the increase in the consumption of latex from 132,000 long tons in 1954 to 160,000 long tons in 1955.<sup>38</sup> Accompanying this rise in latex consumption was a more than proportionate increase in the consumption of GR-S latex which reflected an uptrend from 33 percent of domestic latex consumption in 1954 to 38 percent in 1955.<sup>39</sup> The rise in the relative consumption of GR-S latex reflects its increasing importance in an expanding area of rubber fabrication.

In this market setting the concentration of GR-S latex production becomes particularly significant. Of the 6 companies engaged in the manufacture of GR-S latices during the survey period, 3 producers, Firestone, Goodyear, and United States Rubber, accounted for about 84 percent of production. The percentage distribution of latex production among the six producers is shown in the following Table No. 5:

TABLE NO. 5.—Distribution of GR-S Latex Production by company, May-December 1955

Company	Percent total production
American Synthetic Rubber Corp.	
Copolymer Chemical & Rubber Corp.	10.0
The Firestone Tire & Rubber Co.	34.1
Goodrich-Gulf Chemicals, Inc.	2.4
Goodyear Synthetic Rubber Corp.	26.3
Phillips Chemical Co.	
Shell Chemical Co.	3.8
Texas-U. S. Chemical Co.	
United States Rubber Co.	23.4
United Rubber & Chemical Co.	
Total.....	100.0

Source: Information furnished to the Department by the producers.

*Competition in GR-S in the West Coast Market*

It was pointed out in the Disposal Commission's report to the Congress that the sale of the GR-S plant at Los Angeles to Shell Chemical Corp. would place within the control of that company all of the GR-S capacity on the west coast. While this situation presented potential problems from a competitive viewpoint, it was recognized that Shell would be forced to compete with the gulf coast GR-S plants acquired by the major tire companies. This situation was expected to prevail because the principal large volume consumers of rubber in the west coast market are the major tire companies who would turn to their own gulf coast plants for their raw materials were Shell to exert monopoly pressures. It was, therefore, concluded that this market structure, despite the apparent advantages acquired by Shell as the sole

<sup>38</sup> RMA Press Release, *supra*, note 32.<sup>39</sup> United States Rubber Statistics, pp. 2, 3, and 9, *supra*, note 31.

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producer, would provide genuine competition for the purchaser of the Los Angeles plant.

Sales to the west coast plants of the Big Four rubber companies constituted approximately two-thirds of Shell's sales in the survey period. In addition, almost 90 percent of Shell's sales were made in the west coast market. It is clear that Shell is viewed as the principal source of supply by most of the west coast rubber fabricators. However, the fabricators canvassed in the course of this survey were unanimous in the view that Shell's performance in supplying their GR-S requirements at fair prices had been above reproach.

#### *Performance under small business commitments*

The Rubber Producing Facilities Disposal Act of 1953 established safeguards for the protection of small business which were set forth in section 17 of the Act as follows:

(1) That the disposal program be designed best to afford small business enterprises and users, other than the purchaser of a facility, the opportunity to obtain a fair share of the end products of the facilities sold and at fair prices; The Disposal Commission implemented this provision of the Act by inserting in each contract of sale of a copolymer plant the requirement that the purchaser commit a specified amount of his production for sale to small business enterprises. It was calculated that the commitments entered into by the various copolymer plant purchasers would, in the aggregate, make available to small business enterprises a total of 170,120 long tons of GR-S production per year,<sup>40</sup> representing 23.2 percent of the industry's annual capacity of 733,600 long tons.<sup>41</sup>

Of the 500,150 long tons of GR-S rubber produced by the industry in the first 8 months of private ownership, the producers reported that 143,902 long tons or almost 29 percent were sold to small business enterprises as defined in section 21 (h) of the Disposal Act. From Table No. 6 below, it will be noted that the producers' contract commitments, when measured against production in the survey period, required that 22.7 percent of total output in the survey period be made available to small business enterprises. This commitment appears to have been exceeded by each producer and by the industry as a whole when sales to small business are measured against either production or sales.

<sup>40</sup> Hearings before House Committee on Armed Services on H. R. 2882, H. Res. 170, and H. Res. 171, 84th Cong., 1st sess., p. 1174. The committee obtained firm commitments from nine producers to make available to small business enterprises annually a total of 152,570 long tons of GR-S. An additional 17,600 long tons of GR-S was pledged to small business by the purchaser of the Baytown, Tex., copolymer plant.

<sup>41</sup> Report to Congress, Rubber Producing Facilities Disposal Commission, January 24, 1955, and June 10, 1955.

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TABLE NO. 6.—GR-S Sales and commitments to small business enterprises May-December 1955

Company	Percentage of small business sales to <sup>1</sup>		Percentage of production committed by contract
	Production	Total sales	
American Synthetic Rubber Corp.....	13.8	15.4	10.0
Copolymer Rubber & Chemical Corp.....	11.4	11.8	10.0
The Firestone Tire & Rubber Co.....	30.9	26.7	20.0
Goodrich-Gulf Chemicals, Inc.....	19.8	21.8	16.7
Goodyear Synthetic Rubber Corp.....	21.8	15.0	10.0
Phillips Chemical Co.....	68.3	54.4	50.0
Shell Chemical Corp.....	32.1	27.7	22.5
Texas-U. S. Chemical Co.....	21.4	22.2	20.0
United States Rubber Co.....	58.6	69.8	60.0
United Rubber & Chemical Co.....	57.0	37.9	40.0
Industry average.....	28.8	25.3	22.7

<sup>1</sup> Information furnished to the Department by the producers.

<sup>2</sup> Based on commitments made in testimony before House Armed Services Committee; hearings on H. R. 2882, H. Res. 170, and H. Res. 171, 84th Cong., 1st sess., pp. 1172, 1173, 1174.

<sup>3</sup> Total sales include intracompany transfers.

<sup>4</sup> Report to Congress, June 10, 1955, p. 30A.

The foregoing analysis of the producers' performance under their contractual commitments to small business is predicated upon each producer's classification of sales in accordance with his own interpretation of the definition of small business set forth in section 21 (h) of the Disposal Act, which states:

The term "small business enterprise" means an enterprise independently owned and operated which is not dominant in its field of operation, due regard being given to the number of its employees and dollar volume of business.

This definition obviously affords each producer wide latitude in the classification of his sales to small business.<sup>42</sup> No audit of each producer's sales to small business to determine whether the producer's classification conformed with the definition of small business under the Disposal Act was undertaken. Such an audit was viewed as being outside the scope of this report since it would be in the nature of enforcement of one of the terms of the purchase contracts. The wording of section 20 of the Disposal Act seems to indicate that, after the Disposal Commission ceases to exist, the administration of the purchase contracts and other continuing matters relating to the disposal of the synthetic rubber plants would be administered by an agency of Government to be designated by the President.

One of the purchasers of a copolymer plant, interviewed in connection with this survey, indicated that it was unable to find an interpretation of the term "small business enterprise" appearing in section 21 (h) of the Disposal Act which would provide a basis for the company's segregation of its synthetic rubber customers other than one which would distinguish between the 5 largest tire companies, plus a small group of 4 other users of comparable economic size in one category and all others in the small business category.

<sup>42</sup> For a discussion of the problems of definition of small business, see Report of the Attorney General, pursuant to sec. 5 of Public Law 268, 84th Cong., November 9, 1955.

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In response to the request of this Department for the company's total sales under its small business commitment, the company listed its sales to all customers other than the 5 largest tire companies and 4 other users of comparable economic size.

While considerable controversy centered about the enforcement of the small business provisions of the copolymer plant purchase contracts throughout the course of congressional consideration of disposal legislation, the first 8 months of private ownership failed to provide an opportunity for a legal test of these provisions. Although there was a sellers' market in GR-S throughout the period and a general shortage of supply particularly in the latter months of 1955, no evidence was uncovered by this survey indicating the need for recourse to the courts for enforcement of the small business provisions of the sales contracts.

*Marketing channels utilized in the distribution of GR-S*

Unlike natural rubber, which is bought and sold through intermediate channels of distribution such as brokers and dealers and is traded on organized commodity exchanges, GR-S during the survey period had no organized market and, for the most part, was sold directly to industrial consumers through the sales organizations of the producers. The only deviation from this pattern of selling directly to consumers was found in sales to foreign customers where agents generally acted on behalf of the seller. Most of the producing companies have extensive nationwide sales organizations with district sales offices located in various cities. In addition, some of the larger companies operate warehouses at key distribution points.

Two producers, United States Rubber Co. and Texas-U. S. Chemical Co., market their output through the Naugatuck Chemical division of United States Rubber Co. On the west coast, Naugatuck Chemical division also acts as agent for the sale of GR-S latex produced by Shell Chemical Co. This selling arrangement, according to Shell, is necessary because it lacks the equipment to sell latex in less than carload lots. Naugatuck sells the product to small-business enterprises at the regular price despite the fact that no resale discount or allowance is made by Shell.<sup>43</sup>

*Terms and conditions of sale of GR-S*

It may be said generally that the integrated producers of GR-S, i. e., those who own and operate both GR-S producing facilities and rubber fabricating facilities, do not utilize sales contracts designed to obtain a customer's patronage for fixed periods of time or for specified tonnages of rubber. On the other hand, 2 of the 3 nonintegrated GR-S producers, who lack captive markets and are, therefore, more vulnerable to the vicissitudes of the market, have adopted a policy of obtaining contracts from customers for all or part of their requirements for a specified period of time, in the interest of assuring more stable operations.

<sup>43</sup> Naugatuck's purchase orders certify that the latex it purchases from Shell is purchased for resale to small business.

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One of these companies has entered into contracts with about 30 rubber fabricators to supply their full requirements of GR-S for a period of 1 year and on a year-to-year basis thereafter. Another company has entered into contracts with between 50 and 60 rubber fabricators to supply their requirements of GR-S but none was for a term longer than 1 year.

*The price of GR-S under private ownership*

Since the inception of GR-S production during World War II, its selling price has ranged between 18.5 cents and 26 cents per pound. The price of GR-S for a substantial period was, in large part, fixed by the Government without regard to the cost of production. During recent years, however, the Government priced GR-S so as to produce revenue in excess of all costs of production, including depreciation. In March 1952 the price of GR-S was reduced from 26 cents to 23 cents as a result of an anticipated operating surplus. GR-S continued to be sold at this price until transfer of the GR-S plants to private industry in April 1955.<sup>44</sup>

Under private ownership the base price of GR-S, both hot and cold types, has remained unchanged at 23 cents per pound, f. o. b. producing plant. Under Government ownership a uniform freight charge of 1.1 cents per pound was added to the base price for delivery to any destination in the United States. Since the transfer of the plants to private ownership, the principal change in the price structure has been the addition of actual freight costs to the base price.

The pricing policy which each of the prospective GR-S producers planned to adopt was brought out by testimony of representatives of the purchasers in hearings on the disposal program before the House Armed Services Committee. The consensus of this testimony was that GR-S would initially be sold at 23 cents per pound, the same price at which it was then being sold by the Government. The prospective plant purchasers, however, indicated that they would adopt a pricing policy under which the quoted price would either include the cost of transportation to the buyer's destination or require the buyer to bear the actual cost of freight.<sup>45</sup>

Coincidental with the transfer of ownership, the purchasers of the GR-S facilities published price lists quoting prices for each of the various types of GR-S rubber produced which also specified the terms and conditions of sale. Producers selling on an f. o. b. plant basis quoted a price of 23 cents per pound for the basic types of nonpigmented hot and cold GR-S while those selling on a delivered price basis or on the basis of an allowance for freight charges quoted prices ranging from 24.25 cents to 25 cents per pound. The price structure established under private ownership appears to have been designed to realize for the producer a net

<sup>44</sup> RFC Report 1953, *supra*, note 2, at p. 10.

<sup>45</sup> Hearings, *supra*, note 40, at pp. 1112-1170.

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price of approximately 23 cents a pound on the basic types of GR-S.<sup>46</sup>

Throughout the survey period the price of GR-S has shown marked stability. There have been no significant changes in the selling price of the basic types of hot and cold nonpigmented GR-S from the levels established by the Government. In a limited range of specific GR-S types, prices have been increased while in others, decreases have been noted. For example, Firestone increased the price of some hot nonpigmented GR-S types from 23 cents and 23.5 cents to 26 cents and 28 cents between May 1 and December 1955. Similarly in a different range of hot nonpigmented GR-S types, United States Rubber Co. increased prices between May and December by approximately 1 cent per pound. On the other hand, Phillips Chemical Co. reduced the prices of certain cold black masterbatch GR-S types from 20 cents per pound in May to 19.8 cents per pound in December 1955 due to lowered production costs.

The relative stability of the price of GR-S in the period May through December 1955 is in sharp contrast to the upward movement of natural rubber prices. In May 1955 the average price of No. 1 ribbed smoked sheets at New York was 31.35 cents per pound while in December the average price had moved up to 48.4 cents per pound, reflecting an increase of 54 percent.<sup>47</sup>

Several explanations may be found for the failure of GR-S prices to follow this upward spiral of natural rubber prices. In the first place most of the large rubber fabricators, who presently hold a substantial part of domestic GR-S capacity, find stability of raw material prices a desirable objective and have expressed intention to maintain relatively stable synthetic rubber prices in the interest of reducing fluctuations in the price of natural rubber. Second, private enterprise appears to have embraced the pricing policy adopted by the Government, which was based primarily upon cost of production without regard to the play of market forces and was notable for its achievement of a marked stability in the price of synthetic rubber. And finally, the searching examination of each purchaser by the congressional committees reviewing the disposal program<sup>48</sup> with respect to their anticipated selling prices, coupled with the risk of public disfavor if GR-S prices were sharply increased under private ownership, probably played a significant role in restraining any tendency to increase substantially the price of GR-S during the survey period.

#### *Sales of GR-S Abroad*

The export market for GR-S, while substantial, was not actively exploited during the period of Government ownership of the industry. Exports of GR-S in the period 1947-53 never exceeded 10,000 long tons and reached a new high for the period with 11,000 long tons in 1954. Failure of the United States to export GR-S in substantial volume undoubtedly retarded its use abroad. It

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is estimated that in 1955 foreign rubber fabricators' rubber consumption was only about 8 percent synthetic against a ratio of about 60 percent by American and Canadian competitors. Until foreign production of synthetic rubber is expanded, the market abroad for synthetic rubber appears to offer excellent prospects for the domestic producers.<sup>49</sup>

High level domestic demand for GR-S during the survey period limited the volume of rubber available for exploitation of markets abroad. Nevertheless, 61,259 long tons of S-type rubber were exported in 1955 of which 54,578 long tons, or 89 percent, were exported during the period of private operation of the industry. All of the producers of GR-S save one sold GR-S abroad, but almost half of the rubber exported went to foreign subsidiaries, affiliates, or constituents of the producers. The prices quoted to foreign buyers were generally above domestic prices and sales were handled for the most part by agents abroad rather than by direct contact with the buyer.

#### *Extent of the shortage of GR-S during the survey period*

All of the GR-S producers were canvassed to determine whether there had been a shortage of GR-S during the survey period. All but 2 of the producers, Copolymer Chemical & Rubber Corp. and United Rubber & Chemical Co., reported that a shortage of most types of GR-S prevailed throughout the period and grew more acute during the last 3 or 4 months of 1955. The inadequacy of GR-S supplies posed problems for most producers who sought to maintain their newly acquired customers, to expand their coverage of the market, and to fulfill their small business commitments under the plant purchase contracts.

Of the producers reporting a shortage of GR-S only American Synthetic Rubber Corp. and The Firestone Tire & Rubber Co. avoided the necessity for allocation of production to their customers. Firestone was able to satisfy the requirements of its customers only by reducing the volume of GR-S made available to the company's integrated fabricating plants.

The methods of allocation employed by the producers were, for the most part, based on the pattern of customers' purchases in the relatively short period of operation under private ownership immediately preceding the onset of the shortage. Sincere efforts appear to have been made by the producers to adjust the system of allocation each had adopted to special circumstances. Goodrich-Gulf Chemicals, Inc., for example, reported that it made nominal quantities of GR-S available in hardship cases to small companies who had not previously purchased from it. Goodyear Synthetic Rubber Corp. revealed that it was able to supply enough GR-S in all cases to avoid serious hardship and all of its customers were supplied with sufficient rubber to maintain production, including latex, the supply of which was extremely tight throughout the survey period.

According to Phillips Chemical Co., it construed its first obligation to be to its contract customers and it, therefore, met the

<sup>46</sup> See Appendix Table I.

<sup>47</sup> Rubber Age, March 1956, vol. 78, p. 974; see also Chart V.

<sup>48</sup> Hearings, *supra*, note 40, pp. 1115, 1134, 1142, 1146, 1148, 1154.

<sup>49</sup> Rubber World, December 1955, vol. 133, p. 382.

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requirements of these customers before apportioning the remaining supplies to others on the basis of sales during the first part of the survey period. Allocations were made, in some cases, on the basis of the customer's demonstrated critical needs for the types of GR-S of which Phillips was the sole or principal producer.

Shell Chemical Corp. reported that it avoided the necessity for apportioning its output among all customers by (a) not offering GR-S in the export market, and (b) imposing quantity restrictions only on purchases of the Big Four rubber companies for their Pacific coast plants. With these restrictions Shell's production was adequate to meet the requirements of its customers and also permitted the company to fill orders received from customers east of the Rockies.

#### *Adequacy of GR-S raw materials supplies*

With respect to butadiene and styrene, the basic raw materials essential to the manufacture of GR-S, all of the producers reported that the supply of styrene was adequate but some producers reported a tight supply situation in butadiene during the survey period. Among the companies indicating a shortage of butadiene were American Synthetic Rubber Corp. and Shell Chemical Corp.

American Synthetic advised that considerable difficulty was experienced in obtaining supplies of butadiene in the last quarter of 1955 which necessitated the interruption of production for a short period in October. Shell revealed that its production of GR-S in December was limited by its inability to purchase sufficient butadiene from outside sources to compensate for a deficiency in its own butadiene plant arising out of difficulties encountered by its feed-stock suppliers.

#### *Expansion of GR-S capacity*

The high level of demand for GR-S in the survey period not only stimulated production but also set in motion an expansion program which, when completed some time in 1957, will raise domestic GR-S capacity to more than 1 million tons per year, an increase of 50 percent above the 733,600 long tons of capacity sold by the Government. This expansion does not, however, include the additional capacity of approximately 122,000 long tons which Goodrich-Gulf Chemicals, Inc., acquired by the purchase of the Institute, W. Va., copolymer plant from the Government. The addition of this capacity would bring to 1,132,800 long tons, the total estimated capacity of the United States in 1957.<sup>50</sup>

Expansion of capacity which had been undertaken during the survey period had increased the productive potential of the plants acquired from the Government by approximately 80,000 long tons as of December 31, 1955. It will be noted from Appendix Table II that the principal beneficiaries of this increase in capacity were The Firestone Tire & Rubber Co., Goodrich-Gulf Chemicals, Inc., and Goodyear Synthetic Rubber Corp. On the basis of information furnished by the producers, it appears that the bulk of the ex-

<sup>50</sup> In addition, the Disposal Commission in its January 12, 1956, Report to the Congress on the disposal of the Institute, W. Va., plant reported that General Tire & Rubber Co. and El Paso Natural Gas Co. had announced plans to construct an integrated synthetic rubber complex at Odessa, Tex., capable of producing 40,000 long tons of rubber per year.

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pansion to be completed in 1957 will largely accrue to 5 producers, 4 of which are integrated rubber fabricating companies.

### III. COMPETITION IN THE PRODUCTION AND SALE OF BUTADIENE

In its report to the Congress the Disposal Commission pointed out that a desirable competitive pattern in the disposal of butadiene plants would not necessarily duplicate that sought in the disposal of copolymer plants. The Commission was led to this conclusion by certain inherent characteristics in the structure and organization of the butadiene branch of the synthetic-rubber industry. It had always been clear that the manufacture of GR-S would constitute the major market for butadiene, and in this narrow market there would be no problem of safeguarding a multitude of small consumers. In addition the Commission recognized that each of the petroleum butadiene plants had been deliberately located adjacent to or within the proximity of a copolymer plant which, after disposal, would become the natural market for the butadiene facility. It was, therefore, to be expected that competition in the butadiene market would tend to be confined to a limited segment of the market comprised of the few copolymer plants that (a) did not have a nearby source of butadiene or (b) were adjacent to butadiene plants that lacked the capacity to supply the plant's full butadiene requirements.<sup>51</sup>

The introduction of vertical integration into the structure of the GR-S industry by the sale of copolymer and butadiene plants to the same purchaser tended further to limit the area of potential competition in the production and sale of butadiene. To offset the possibility that the volume of open market transactions between sellers and buyers of butadiene might be reduced to a level that might foster market manipulation, the Disposal Commission inserted in several of the contracts of sale of butadiene plants a requirement that a specified percentage or tonnage of the plant's production be earmarked for sale in the open market.

#### *The structure of competition in butadiene*

The share of the domestic butadiene market achieved by each of the purchasers of butadiene plants in the survey period, when measured by production or sales, closely parallels the distribution of productive capacity at the time of disposal. The share of the market held by each of the plant purchasers is shown in Table No. 7, below.

Goodrich-Gulf Chemicals, Inc., ranked first during the survey period in both butadiene production and sales with 16.2 percent and 15.9 percent respectively. Within a fraction of a percentage point of second place in both production and sales of butadiene, were Texas-U. S. Chemical Corp. and Petro-Tex Chemicals Corp., each with approximately 15 percent of the market. The fourth ranking producer with 12 percent of production and more than 11 percent of sales was Phillips Chemical Co. followed closely by Petroleum Chemicals, Inc., with 11 percent of the mar-

<sup>51</sup> Disposal Report, January 24, 1955, *supra*, note 17, pp. 26-27.

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ket. These five companies accounted for almost 70 percent of production and 68 percent of sales in the survey period. The remaining 30 percent of the market was divided among eight producers, the largest of which accounted for a little more than 7 percent of domestic production.

TABLE NO. 7.—*Distribution of Butadiene Capacity, production and sales by company, May-December 1955*

Company	Percent of total capacity as of May 1, 1955	Percent of production	Percent of sales	Percent of production sold in open market
Goodrich-Gulf Chemicals, Inc. <sup>1</sup>	15.9	16.2	15.9	26.2
Texas U. S. Chemical Corp. <sup>1</sup>	15.9	15.2	14.6	30.0
Phillips Chemical Co.	12.4	12.1	11.4	43.2
Petroleum Chemicals, Inc.	10.6	11.4	11.2	100.0
Humble Oil & Refining Co.	7.7	7.2	9.7	100.0
Copolymer Rubber & Chemical Corp.	3.4	4.8	4.8	0.1
Petro-Tex Chemicals Corp.	15.0	15.0	14.7	100.0
Shell Chemical Co. <sup>3</sup>	10.6	7.7	7.5	0.0
Standard Oil Company of California <sup>3</sup>		2.3	2.3	100.0
Union Carbide & Carbon Corp.	1.3	1.1	1.1	100.0
Dow Chemical Corp.	1.3	1.1	1.1	100.0
Esso Standard Oil Co.	5.5	4.7	4.6	100.0
Publicker Industries, Inc.		1.2	1.1	100.0
Total	100.0	100.0	100.0	60.8

<sup>1</sup> Each of these companies bought an undivided half interest in the Neches, Tex., butadiene plant.

<sup>2</sup> Includes intracompany transfers.

<sup>3</sup> The plants purchased by Shell Chemical Co. and Standard Oil Company of California operated in tandem and the percentage shown represents the joint capacity of both plants.

<sup>4</sup> These 3 companies produced butadiene in their own facilities throughout the period of Government operation of the synthetic rubber industry. The respective capacity, production and sales of each in the survey period is estimated, since their operations were not included in the Department's investigation.

<sup>5</sup> Publicker leased the Louisville, Ky., alcohol butadiene plant from the Government on March 25, 1955.

Source: Information furnished to the Department by the producers; Disposal Report, January 24, 1955. *supra*, note 17, p. 36.

#### *Butadiene sales in the open market*

Analysis of the pattern of sales in the 8-month survey period reveals that approximately 61 percent of all butadiene sold could be characterized as open market sales, that is, arm's length transactions between independent sellers and independent buyers.<sup>52</sup> This percentage, however, includes sales of butadiene by producers whose plants are adjacent to a copolymer plant which absorbs all or practically all of the output of the plant. Excluding the sales of these producers, approximately 40 percent of all butadiene sales made in the survey period were open market transactions. In view of the structure of the market as it appeared at the time of disposal, this is a surprisingly large percentage.

The contracts for the purchase of the Government-owned butadiene plants, unlike those covering the purchase of GR-S plants, did not require the sale of a specified share of production to small business. However, commitments were made by the purchasers to sell stated amounts of butadiene to others to assure the availability of butadiene in the open market. Goodrich-Gulf

<sup>52</sup> See Table No. 7.

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Chemicals, Inc., agreed to make available 17,000 short tons of butadiene annually; Humble Oil & Refining Co. proposed to sell 80 percent of the plant's production to American Synthetic Rubber Corp. and Copolymer Corp., and the remainder in the open market; Phillips Chemical Co., while not specifying the amount of production to be sold, agreed to make a substantial quantity available for sale to others; Texas-U. S. Chemical Co. proposed to sell 26,000 short tons annually in the open market; and Standard Oil Company of California intended to sell all of its output in the open market.<sup>53</sup>

On the basis of the distribution of butadiene sales during the survey period, it will be observed from Table No. 7 that Goodrich-Gulf, which had committed itself to the sale of 17.9 percent of its productive capacity in the open market, actually sold 26.2 percent of production in that market. Texas-U. S. Chemical Co., which committed itself to sell 27.4 percent of its potential production in the open market, actually sold 30 percent of its output to others. While Phillips Chemical Co. did not make a specific commitment to sell butadiene in the open market, its performance in the survey period indicates that over 43 percent of its sales were made in that market and, furthermore, it furnished butadiene to all but one of the GR-S producers. Humble Oil & Refining Co., which was pledged to sell 80 percent of its butadiene production to American Synthetic Rubber Corp. and Copolymer Corp., fulfilled its commitments to the small GR-S producers when its sales to United Rubber & Chemical Co. are included.

#### *Marketing channels utilized in the distribution of butadiene*

All producers of butadiene other than Humble Oil & Refining Co., which marketed its butadiene through Enjay Co., an affiliate corporation, and Standard Oil Company of California, which sells its butadiene through its affiliate, Oronite Chemical Co., market their output directly to consumers.

#### *Terms and conditions of sale of butadiene*

On the basis of information furnished by the producers, none have entered into contracts to supply the full requirements of any customer. Most producers sell butadiene on both a contract and a spot basis. Contracts generally run for a term of 1 year and on a year-to-year basis thereafter with provisions for cancellation by either party on proper notice. Four producers of butadiene have negotiated contracts which run for terms of from 1 to 5 years with provisions for renewal and cancellation. The price at which butadiene will be sold is specified in the contracts but is subject to escalation clauses which vary from company to company based upon price indexes generally used in petroleum industry contracts.

During the survey period the contract price of butadiene was consistently below the price of butadiene sold on a spot basis in the open market. Further price advantages accrued to purchasers

<sup>53</sup> Supplement, Report to Congress, January 24, 1955. Rubber Producing Facilities Disposal Commission.

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under some contracts since they were accorded some form of freight equalization which tended to reduce the net cost to the buyer. Spot sales on the other hand were generally made on an f. o. b. producing plant basis with the purchaser absorbing full transportation costs.

Contract prices for butadiene as of May 1, 1955, ranged from 12.5 cents to 14.75 cents per pound f. o. b. producing plant with some sellers offering freight equalization. Spot prices initially were 15 cents to 15.5 cents per pound f. o. b. producing plant. During the survey period contract prices for butadiene were adjusted upward under the escalator provisions of the various contracts and at the close of the year ranged from 14 cents to 14.98 cents per pound f. o. b. producing plant.

#### *Adequacy of butadiene feedstock supplies*

Throughout the survey period feedstock supplies were generally characterized as adequate with a few exceptions. One large producer of butadiene with captive feedstock sources reported that the supply was tight but by spot purchases of feedstocks the company had been able to meet its full requirements. Another integrated producer<sup>54</sup> reported a shortage of feedstocks necessitating spot purchases from outside sources but had taken steps to alleviate the shortage by expanding refinery capacity. On the whole there were no indications that any producer of butadiene had, during the survey period, experienced serious difficulties in making the necessary arrangements for an adequate supply of feedstocks.

#### *Expansion of butadiene capacity*

As a consequence of the expansion of GR-S copolymer plant capacity presently underway, a parallel expansion of butadiene capacity has been initiated and scheduled for completion in 1957. On the basis of present plans the capacity for the production of butadiene is expected to rise to a total of 718,000 short tons, or almost one-third. (See Table No. 8.) Seventy percent of this expansion is to be undertaken by two producers, Petro-Tex Chemical Corp. and Phillips Chemical Co. When the planned expansion has been completed, Petro-Tex will become the largest domestic producer of butadiene and Phillips Chemical Co. will assume the second ranking position. Whether or not the capacity for the production of butadiene will be adequate to meet the needs of the expanded GR-S industry cannot be precisely determined at this juncture. It would appear, however, that the expansion of butadiene capacity by 33 percent is somewhat below the expansion of GR-S capacity by approximately 50 percent.

<sup>54</sup> Integrated backward to petroleum feedstock supplies.

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TABLE No. 8.—Butadiene capacity, by company, as of disposal and after completion of planned expansion

Company	Capacity as of disposal <sup>1</sup>		Total expanded capacity to be completed in 1957 <sup>2</sup>	
	Short tons	Percent of total	Short tons	Percent of total
Copolymer Rubber & Chemical Corp.	23,000	4.2	23,000	3.2
Petro-Tex Chemical Corp.	90,000	16.4	170,000	23.7
Goodrich-Gulf Chemicals, Inc.	95,000	17.3	95,000	13.2
Texas-U. S. Chemical Co.	95,000	17.3	95,000	13.2
Humble Oil & Refining Co.	46,000	8.3	62,000	8.7
Petroleum Chemicals, Inc.	63,000	11.5	79,000	11.0
Phillips Chemical Co.	74,000	13.5	112,000	15.6
Shell Chemical Corp.	63,000	11.5	82,000	11.4
Standard Oil Co. of California				
Total	549,000	100.0	718,000	100.0

<sup>1</sup> Disposal Report, Jan. 24, 1955, *supra*, note 17, p. 36.

<sup>2</sup> Information furnished to the Department by the producers.

## IV. COMPETITION IN BUTYL RUBBER

Two plants were constructed by the Government for the manufacture of butyl rubber—one located at Baton Rouge, La., and operated for the Government by Esso Standard Oil Co., the other at Baytown, Tex., operated by Humble Oil & Refining Co. When the plants were offered for sale by the Disposal Commission, the only bids received for these facilities were from the plant operators. Both bidders were affiliated with Standard Oil Co., (N. J.), Humble an 87.36 percent owned affiliate, and Esso a wholly owned subsidiary. In addition, Standard Oil Development Co., another subsidiary of Standard, held all of the patents covering the manufacture of butyl rubber. The Disposal Commission, faced with the alternative of rejecting the purchase proposals of these bidders and thus failing to meet the minimum statutory capacity requirements essential to an acceptable disposal program for the industry as a whole, elected to sell the butyl rubber plants to Esso and Humble in order to present to Congress a program which met the minimum capacity requirements of the Act.<sup>55</sup>

To alleviate the antitrust problems posed by the disposal of both plants to corporations which were controlled by Standard Oil Co. (N. J.), the contract covering the sale of the Baton Rouge, La., plant to Esso contained a requirement that Esso agree to sell the facility to a bona fide purchaser during a 3-year period after purchase of the plant, provided that butyl rubber producing facilities of at least 43,000 long tons of aggregate annual capacity had not been substantially completed in the United States by a party unaffiliated with Standard prior to the receipt of an offer to purchase the plant.<sup>56</sup>

<sup>55</sup> Sec. 24 of the Disposal Act.

<sup>56</sup> Supplement. Report to Congress, January 24, 1955, Rubber Producing Facilities Disposal Commission, p. 237, appendix to Baton Rouge, La., butyl plant purchase contract, par. 5.

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Esso continues under the requirement to offer the Baton Rouge plant for sale in the event a prospective new entrant should desire to utilize this facility to enter the production of butyl rubber. This commitment will continue in effect until April 1958. In this connection it was learned upon inquiry that Esso had failed to receive any offers during the survey period for the purchase of the Baton Rouge plant.

*Marketing channels utilized in the distribution of butyl rubber*

In their purchase proposals both Humble and Esso indicated that should they be the successful purchasers of the butyl plants, Humble would sell the output of its facility to Enjay Co., Inc., a wholly owned subsidiary of Standard Oil Co. (N. J.) for resale, except such quantities of butyl as Humble may sell directly to consumers within the State of Texas. Esso similarly indicated its intention to use Enjay as its exclusive marketing agent for butyl rubber produced in its plant. Thus, Enjay would market substantially all of the butyl rubber produced by the prospective purchasers. Since the disposal of the butyl plants, practically all of the butyl sold in the United States, except that which is imported from Canada, has been sold by Enjay.

*The changing market for butyl rubber*

Until 1954 it was a generally accepted fact that butyl rubber had permanently displaced natural rubber in the manufacture of passenger car inner tubes, a market which consumed 90 percent of butyl rubber production. At the time disposal of the butyl rubber plants was recommended by the Disposal Commission, the proposed disposal of both butyl rubber plants to companies controlled by Standard Oil Co. (N. J.), when viewed against butyl's domination of the inner tube market, posed significant competitive problems.

After the transfer of ownership of the butyl rubber plants, however, it became increasingly apparent that the tubeless tire, which was introduced on a volume basis in the latter half of 1954, and required relatively small quantities of butyl rubber or none at all, would ultimately displace the inner tube tire and dissipate the market which butyl rubber had heretofore dominated. A representative of Esso Standard Oil Co. predicted, during hearings on the disposal program, that butyl rubber consumption in 1955 would fall 36 percent below the peak year consumption in 1953 due to the expansion of tubeless tire manufacture and that within a year or two no inner tubes would be manufactured.<sup>67</sup> Butyl rubber consumption in 1955 actually declined almost 32 percent below its 1953 peak and was accompanied by a 30 percent drop in production. At the same time total rubber consumption in the United States increased 13 percent reflecting the fact that butyl rubber was losing ground as the result of the loss of a substantial market.<sup>68</sup>

<sup>67</sup> Hearings, *supra*, note 40, p. 180.

<sup>68</sup> United States Rubber Statistics, *supra*, note 31.

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The decline in the use of butyl rubber in the manufacture of inner tubes, while posing marketing problems for the purchasers of these plants, has brought a partial resolution of the competitive problems created by the concentration of ownership of productive facilities. The pressure upon the butyl rubber producers to find new large tonnage markets has increased and butyl rubber must now be actively marketed in areas which had not previously been exploited. The aggressive pursuit of this objective should place butyl rubber in more active competition with all other types of natural and synthetic rubbers.

Some progress has been made, albeit small, in the direction of expanding the market for butyl rubber outside the manufacture of transportation products. In 1953 butyl rubber accounted for 8.4 percent of all the new rubber used in the United States in transportation products, while in 1955 butyl's share of new rubber consumption in these end products declined to 4.7 percent. In the nontransportation segment of the rubber manufacturing industry, butyl accounted for 1.2 percent of total new rubber consumption in 1953 and its share had increased to 1.4 percent in 1955.<sup>69</sup>

*Sales to small business*

In the contract of sale covering the Baton Rouge plant, Esso agreed to offer to small-business enterprises at least the same proportion of butyl rubber produced at this plant as was sold by the Government to small-business enterprises during the years 1953 and 1954. Since this plant was the only source of isoprene, one of the two essential ingredients necessary to the manufacture of butyl, Esso also agreed to make this product available. Humble agreed to make available to small-business enterprises a reasonable portion of the butyl rubber produced and marketed outside of Texas. In the survey period Enjay, the sole marketer of domestic butyl rubber in the United States, sold approximately 10 percent of its total sales of butyl to small-business enterprises.<sup>70</sup>

*The price of butyl rubber under private ownership*

All of Enjay's sales of butyl rubber during the survey period were made on a spot basis against buyers' orders, and no sales contracts were in effect. The price at which butyl was initially sold after the acquisition of the facilities was 23 cents per pound<sup>71</sup> f. o. b. producing plants at Baton Rouge, La., or Baytown, Tex.; 25 cents per pound f. o. b. warehouses at Akron, Ohio, Newark, N. J., or Chicago, Ill.; 25.5 cents per pound f. o. b. Boston, Mass., warehouse; and 26 cents per pound f. o. b. Los Angeles warehouse. On shipments f. o. b. producing plants the company equalized freight to customer's destination with the lowest freight charge from either producing plant. There were no price changes during the survey period.

<sup>69</sup> United States Rubber Statistics, *supra*, note 31.

<sup>70</sup> Supplement to Disposal Report, *supra*, note 53, pp. 237-239.

<sup>71</sup> Since the acquisition of the facilities, a new grade of butyl has been added for which a price differential of 1 cent above the regular grade of butyl was established.

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*Butyl rubber patents*

Esso, its subsidiaries, and affiliates currently control all patents necessary to the production of butyl rubber. Since Esso and Humble operate the only butyl plants in commercial production in this country, no patent problems have arisen. Esso has, however, granted butyl rubber licenses to others both during and subsequent to Government ownership of the butyl plants. The companies licensed under the butyl patents include B. F. Goodrich Co. licensed in 1950, Goodrich-Gulf licensed in 1953, and Petroleum Chemicals, Inc., licensed in 1954. Subsequently supplemental butyl licenses have been offered by the Esso group to the same licensees but have not yet been accepted. A French company is reported to be considering a butyl license from Esso at the present time.

The domestic butyl licensees of Esso have not as yet built butyl rubber plants. No information was available as to the present plans of these companies, although it was suggested that the French company is believed to be planning the immediate construction of a butyl rubber plant of about 20,000 long tons annual capacity.

## V. THE IMPACT OF PRIVATE OWNERSHIP OF SYNTHETIC RUBBER FACILITIES ON SMALL BUSINESS

In order to determine whether the small-business objectives of the Act were being achieved during the 8 months of private ownership of the synthetic rubber plants, a representative sample of 55 small-business firms in the rubber industry was selected for investigation. The selection of the firms in the sample gave consideration to (a) types of products manufactured, (b) geographic location, (c) annual sales volume, (d) number of employees and other factors. In addition, each of the companies interviewed was asked to identify any rubber fabricator which, in the knowledge of the firm's officials, had experienced difficulty in obtaining an adequate supply of synthetic rubber during the survey period. Had any of the firms in the sample identified others experiencing supply difficulties, the sample would have been enlarged to include them.

Fifty-two of the fifty-five companies included in this sample were found to have used synthetic rubber in their manufacturing operations during the survey period. Forty-two percent of these firms had less than 200 employees, and 77 percent had fewer than 500 employees. When the size of the companies in the sample was measured on the basis of sales volume, it was found that 37 percent had annual sales less than \$2 million and 45 percent had sales under \$3 million. The smallest firm in terms of employment had 16 employees, while the largest firm had 2,000 employees.

Fifty of the companies in the sample, reporting their rubber consumption in 1955, consumed a total of 52,877 long tons of GR-S or approximately 7.3 percent of the total GR-S consumed in the United States. The sample's share of GR-S rubber consumed

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in 1955 by all rubber fabricators except the Big Four is estimated at approximately 18 percent.

This survey established that, despite the shortage of GR-S in the last few months of 1955, practically all small rubber fabricators interviewed had, in their opinion, received a fair share of synthetic rubber at fair prices. Slightly more than half the companies comprising the sample reported that they had obtained adequate GR-S supplies while the remainder indicated they had experienced some degree of difficulty in obtaining GR-S due, in large measure, to the general stringency of supply. For the most part those experiencing difficulty in obtaining rubber found supplemental supplies through alternative sources and thus met all of their rubber raw material requirements.

The practice of buying GR-S in the open market on a spot basis seemed to prevail among the small rubber fabricators since almost 70 percent of the firms in the sample purchased their synthetic rubber requirements on this basis. The remaining 30 percent entered into short term renewable contracts with GR-S producers. Although some of the firms committed to purchase contracts experienced supply problems, by far the largest number reporting difficulty were those relying upon open-market purchases.

Less than 10 percent of the companies interviewed expressed dissatisfaction with the industry's performance under private ownership or foresaw problems which might arise in the future. The most frequently voiced complaint related to the company's inability to obtain an adequate supply of GR-S. While there were implications that the company's competitive position had been impaired in some instances this effect was generally denied. Several of the firms anticipated potential problems in the future but found no basis for criticism of the industry's performance thus far. These firms were in direct competition with the Big Four rubber companies and anticipated the possibility that ownership of GR-S plants by the Big Four might ultimately have the effect of widening the competitive disparities already existing between them and their largest competitors.

On the other hand there were a significant number of small companies that found private enterprise far superior to Government operation. The advantages listed by these companies may be classified under two major headings: (a) improved relationships between buyer and seller; and (b) superior technical liaison and assistance.

With respect to the improvement in buyer-seller relationships, it was pointed out that under Government operation of the synthetic rubber industry, customers were required to pay in advance and to place their orders 90 days in advance of delivery. Under private operation the buyer's orders are filled immediately on open account. In addition, buyers have a multiple choice of suppliers and can deal directly with any one of them on a personal basis. A point most frequently stressed by some of the small firms interviewed was the importance of the closer liaison between the technical staff of the seller and the buyer. The opportunity to discuss

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technical problems with suppliers has made it possible for the small user to be more certain that the exact type of rubber desired will be obtained. New ideas on the use of GR-S are passed on to small users and the producers make available promptly to the small firms the results of their research in new types of rubber. Finally, it was claimed that the quality of GR-S has generally improved during the short period of private ownership.

## VI. PATENTS AND TECHNICAL INFORMATION

One of the important features of the Government's war-inspired synthetic rubber program was the series of patent agreements entered into by the Government with a number of petroleum, chemical, and rubber companies relating to the interchange of technical information and patent rights. As a corollary to such exchange of information it was found necessary to provide a supporting framework of patent protection, i. e., an exchange of operating rights under both existing patents and those which may be developed during this period of industry cooperation. It was recognized that these industry agreements, of necessity, should be made through Government assistance and cooperation. Accordingly, the Government, through the medium of the Rubber Reserve Company, negotiated a series of patent agreements with various companies holding patent rights and technology in the field of synthetic rubber, including GR-S, butadiene, styrene, and butyl rubber.

In formulating its program of disposal in 1955, the Disposal Commission endeavored to insure that plant purchasers secure all necessary patents and technical information requisite to the operation of these plants. As a result, in its invitation<sup>62</sup> for proposals to purchase, the Disposal Commission required that there be included as a part of each proposal, a statement by the prospective purchaser as to any synthetic rubber patent rights claimed. The Commission defined the term "patent right" to include a right to any royalty or license fee, or a right to exclusive proprietary interest, or power to grant immunity, or a right to disclose technical information or trade secrets. More than half the purchasers of the Government facilities failed to make such claims.<sup>63</sup>

In order to assist bidders in determining which patent rights and technical knowledge would be necessary to the operation of a particular synthetic rubber facility, the Disposal Commission issued a brochure containing copies of the several patent agreements from which the prospective plant purchasers could determine what rights would become available to plant purchasers. In a foreword to this brochure the Commission extended any further assistance appropriate to effectuate the purposes of the Disposal Act but indicated that it would not interpret any of the

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agreements. Finally, in the appendix to each contract of sale, the Commission pledged its assistance to purchasers in obtaining rights necessary for plant operation.

In view of the apparent significance of patents in the field of synthetic rubber and their potential effect upon the development of a free, competitive synthetic rubber industry, there was included in this survey a series of questions designed to elicit specific information concerning patent problems which may be faced by producers of synthetic rubber and its component materials. Inquiry was made as to the type of patent problems encountered; whether such problems had been resolved and the means of resolution; and whether burdensome conditions were imposed in connection with the securing of patent licenses and other technical information necessary to plant operation. Finally, information was sought as to the licensing policy of particular companies and whether the company interviewed had been a party to agreements in the field of synthetic rubber (to which the Government was not a party) which provided for the mutual exchange of patent rights and technology.

With respect to the problems encountered by plant purchasers in securing patent rights and technical information essential to the operation of the facilities acquired from the Government, eight of the companies canvassed categorically stated they had experienced no problems whatsoever. Of the remaining companies who expressed views on this subject, two stated that their sole problem related to a determination of the precise rights needed in the field of butadiene and the usual problems of infringement and validity. Both firms indicated they were presently engaged in an extensive study along these lines.

One operator of a butadiene plant stated that it was not completely satisfied with the patent licenses it might be required to take from the patent holders in the butadiene field. It was of the view that the licenses which it had been offered under the Oil Industry Process Agreement<sup>64</sup> would require the company to acknowledge the validity of many patents which did not appear to relate to the operation of its own plant and would, in effect, exact tribute for alleged patent rights which were not now asserted by their individual owners with respect to this company's plant. Moreover, the company indicated that the royalty rate stipulated in the license appeared to be higher than that which had been quoted to others for the rights which the company might need. Were the company required to pay the license fee proposed, it did not feel that plant operations could be carried on in a realistic and competitive fashion. The company also expressed the view that its larger competitors who have not as yet consummated license agreements with the patent holders may be given lower royalty terms than that which the company may ultimately secure. The company did not feel that the use of a "most favored licensee provision" would, for practical purposes, offer

<sup>62</sup> Rubber Producing Facilities Disposal Commission, Release No. 1, November 25, 1953.

<sup>63</sup> Subsidiaries of Esso Standard Oil Co. asserted substantial rights in the butyl, isobutylene, isoprene, styrene, and butadiene fields; B. F. Goodrich Co. asserted a butadiene purification patent; Phillips Chemical and its parent made substantial claims in the GR-S and butadiene fields; Shell's affiliate, Shell Development, and Sinclair were others who asserted claims in the synthetic rubber field.

<sup>64</sup> Negotiated by Rubber Reserve in 1942 with Universal Oil Products Co., Shell Development Co., Phillips Petroleum Co., and Standard Oil Development Co.

## 28 COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

it sufficient protection, since such provision would not assure that a subsequently granted license would not be more favorable.

With respect to the assistance extended to plant purchasers by the Disposal Commission in connection with any of their problems, the companies uniformly indicated that the Commission had given all the assistance which had been requested of it. None of the companies had requested the Disposal Commission to take any action in their behalf.

A number of plant purchasers reported that it had been found necessary to supplement the patent rights which had run with the plants by securing licenses covering patent rights held by others. There appears to have been no onerous or burdensome conditions imposed upon such licensees by the grantors of the patent rights and technical information.

None of the companies interviewed was a party to agreements with other persons having patent rights in the synthetic rubber field (to which the Government was not a party) involving the mutual exchange of patent rights and technology.

## VII. FINDINGS AND OPINIONS

In commenting upon competition existing in the synthetic rubber industry in the first 8 months of private ownership, I must point out that the operating experience of the industry under private enterprise has been inadequate to provide a basis for a conclusion as to whether free and unfettered competition has been firmly established in this industry. In addition, the existence of a seller's market throughout most of the initial period of private ownership further complicates an evaluation of the character of competition at this time. All producers were able to sell their entire output with ease and, in the case of a majority of the producers, demand outran supply, forcing the allocation of GR-S among their customers. In this posture of the market such competition as did exist would have been found on the buying rather than on the selling side of the market. Moreover, it has been the experience of this Department in the reconstruction of competition in monopoly cases, an experience which parallels the transition of this industry from Government monopoly to competitive private enterprise, that a considerable period of time must elapse before it can be determined whether all of the effects of the monopoly have been fully dissipated.

I find, however, a number of factors favorable to the development and growth of competition in the synthetic rubber industry. Especially important in the evaluation of the presence and effectiveness of competition in this industry is the fact that there are 10 relatively strong GR-S producers. At this juncture it would appear that no producer has achieved what might be characterized as undue market influence. Similarly, in the manufacture of butadiene, there are nine companies with adequate resources and relative market shares favorable to the development of effective competition. The market behavior of the producers tends to

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 29

indicate that, despite the presence of a substantial degree of vertical integration, a sizable volume of both GR-S and butadiene moves into the open market, thus providing adequate opportunity for normal market forces to come into play in the determination of the industry's level of output and the movement of prices.

The synthetic rubber industry is a young and growing industry. Under competitive private enterprise its future growth should be accelerated by the opening of new markets at home and abroad, as well as by an expanding technology which will produce improved types of rubber and new applications for existing types. There is, therefore, present a climate favorable to expansion by present producers as well as the entry of new producers. A substantial expansion of GR-S and butadiene capacity is already well underway, and a new producer has indicated his intention to enter the industry by the construction of new facilities. It would appear, therefore, that no barriers have been erected thus far to prevent the entry of new producers into the synthetic rubber industry, a fundamental prerequisite to a genuinely competitive industry.

On the other hand, however, I find that there are present in the industry some factors which may constitute impediments to the development of vigorous competition. Among these factors I note a tendency on the part of the producers to continue the pattern of product specialization which existed under Government ownership when all of the facilities were operated as an integrated whole. This pattern of production, if continued, would tend to insulate certain areas of production from the competition that would normally be expected to develop in a competitive industry. In this connection, I note that some producers have undertaken plant expansions which will further diversify their pattern of production, and it is to be hoped that this trend will be extended so that there will develop more effective competition in all types of GR-S produced.

One of the tests of a competitive industry is the manner in which prices behave. In the short period of private operation of this industry I find what appears to be a tendency toward price inflexibility, a characteristic of industries in which there is a high degree of price administration. It is, however, premature to draw any conclusions at this time as to the specific character of synthetic rubber price behavior, since there have been no general price changes and those that have occurred have affected relatively minor items of production.

The stability of synthetic rubber prices during the survey period, when demand exceeded supply and natural rubber prices reflected the influence of world demand, tends to indicate that the price policy adopted by the producers brings about a result closely paralleling the behavior of prices under Government ownership. The lack of sensitivity of GR-S prices to the forces of supply and demand may, therefore, indicate that all vestiges of Government monopoly have not yet been completely eliminated from the synthetic rubber market. It is to be hoped that over the long term GR-S prices will tend more to reflect the influence of supply and

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 31

In my opinion on the sale of the butyl rubber plants to affiliates of Standard Oil Co. (N. J.),<sup>65</sup> I stated that, with the safeguards provided and under the circumstances then prevailing, the sale would best foster the development of a free competitive synthetic rubber industry. The experience of the first 8 months of private ownership has justified my expectation. In addition, the loss of a part of the major market for butyl rubber has introduced new elements of competition which tend to relieve some of the doubts held concerning competition in this branch of the synthetic rubber industry at the time of disposal.

<sup>14</sup> Disposal Report, January 24, 1955, *supra*, note 17, pp. 34-35.

Price per poundl

1605 | .....do.....  
See footnotes at end of table.

APPENDIX TABLE I.—Price schedules of GR-S producers, May–December 1955—Continued

[Price per pound]

GR-S Type No.	Description	American Synthetic Rubber Corp. <sup>1</sup>	Copolymer Rubber & Chemical Corp. <sup>2</sup>	The Firestone Tire & Rubber Co. <sup>3</sup>	Goodrich-Gulf Chemicals, Inc. <sup>4</sup>	Goodyear Synthetic Rubber Corp. <sup>5</sup>	Phillips Chemical Co. <sup>6</sup>	Shell Chemical Corp. <sup>7</sup>	Texas-U. S. Chemical Co. <sup>8</sup>	United States Rubber Co. <sup>9</sup>	United Rubber & Chemical Co. <sup>10</sup>
1703	Cold GR-S oil masterbatch.....			19.5	20.6	20.75	21.2	19.5	20.75		
1704	do.....										
1705	do.....			19.25	20.35			19.25			
1706	do.....						21.0	19.25			
1707	do.....				19.1			18.00	19.25		
1708	do.....						19.7		19.50		
1709	do.....							17.75			
1710	do.....			17.75	18.85	19.0			19.0		
1711	do.....						19.4		19.00		
1712	do.....						19.4	17.75			
1801	Cold GR-S oil black masterbatch.....		18.85	17.75	18.85			17.0			17.0
1903	do.....						18.0-17.9				
2000	Hot GR-S latex.....			26.0				22.75		26.3	
2001	do.....			26.0						26.3	
2002	do.....			28.5						28.8	
2003	do.....			29.5							
2004	do.....			29.5				26.0			
2005	do.....									30.0	
2006	do.....									26.3	
2101	Cold GR-S latex.....		23.0	24.0	22.5	27.75-30.0		22.5		28.5	
2102	do.....		31.0								
2104	do.....					28.0-32.0					
2105	do.....		31.0	31.0		28.0-32.0				31.2	

<sup>1</sup> Prices f. o. b. Louisville plus 1.1 cents per pound freight for carload lots or 1.7 cents per pound for less than carload lots. Export prices 26 cents per pound carload, 26.5 cents per pound less than carload, f. a. s. Atlantic or Gulf ports.

<sup>2</sup> Prices on dry rubber are f. o. b. Baton Rouge, La., with freight prepaid and allowed. Prices on latex are increased by 1.1 cents per pound on wet weight and are f. o. b. Baton Rouge, La., with freight prepaid and allowed. Less than full carloads but more than 30,000 pounds are priced at 0.4 cents per pound higher than carload price and less than 30,000 pounds are priced at 0.9 cents per pound over carload prices.

<sup>3</sup> Prices shown are f. o. b. Lake Charles, La., freight collect except for prices with asterisk which are f. o. b. Akron, freight collect. Latex prices are f. o. b. Akron, no freight allowed, less than carload. Shipments of all types of GR-S can be made from Akron warehouse, f. o. b. Akron, freight collect. On all shipments from Akron add 1.3 cents per pound (equivalent to carload rate from Gulf coast to Akron).

<sup>4</sup> Add 0.5 cents per pound for less than carload shipments. Prices for export higher. Prices listed are f. o. b. plant, minimum transportation prepaid, except in the case of S-type latex which is sold f. o. b. plant.

<sup>5</sup> Price per pound in lots of 60,000 pounds up, f. o. b. shipping point, freight prepaid; only to delivery points east of Rockies: on shipments of 20,000 to 60,000 pounds add  $\frac{3}{4}$  cent per pound, and on less than 20,000 pounds add 1  $\frac{1}{4}$  cents per pound to prices shown for dry rubber. Latex price is tank car price per pound dry solids, f. o. b. Akron, freight prepaid. Add 2 cents per pound for shipments to Pacific coast, Montana, Idaho, Utah, Arizona.

<sup>6</sup> Prices delivered to buyer at any destination in the United States, freight allowed on basis of actual transportation cost, up to but not in excess of, costs figured on rail rates for minimum carload shipments. Quantity discounts on long term contracts.

<sup>7</sup> All prices f. o. b. Torrance, Calif., with mode of delivery agreed upon. Latex shipped in 10,000 gallon tank cars. Price of 1801—rubber hydrocarbon basis only—oil not included. No quantity discounts; no extra charge for small lot deliveries.

<sup>8</sup> Prices listed are carload or truckload: East of Salt Lake City—f. o. b. Point Neches, Tex., minimum rail transportation allowed: 60,000, 70,000, or 80,000 pounds minimum car rate depending on tariff minimums. West of Salt Lake City—f. o. b. Point Neches, minimum rail transportation allowed to Los Angeles, Calif. Less than truckload prices are 1  $\frac{1}{4}$  cents per pound above carload prices and east of Salt Lake City—f. o. b. Point Neches or sales warehouses—truck transportation allowed. West of Salt Lake City add  $\frac{1}{2}$  cent per pound.

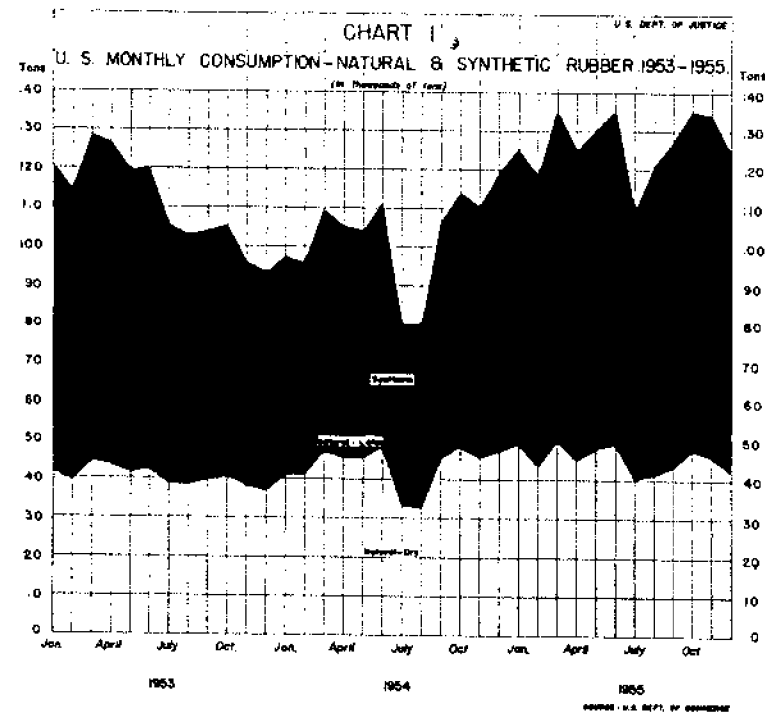
<sup>9</sup> Price f. o. b. Naugatuck, Conn., minimum transportation prepaid truckload. Quantity dependent upon carrier's minimum weight. Tank car prices west of Rockies 1 cent per pound higher. Latex price per pound dry weight, f. o. b. Naugatuck. Tank car prices will be allowed on a minimum of 3 tank cars released during a 7-day calendar period.

<sup>10</sup> Prices shown are f. o. b. Baytown. No quantity discounts. Uniform credit terms to all customers.

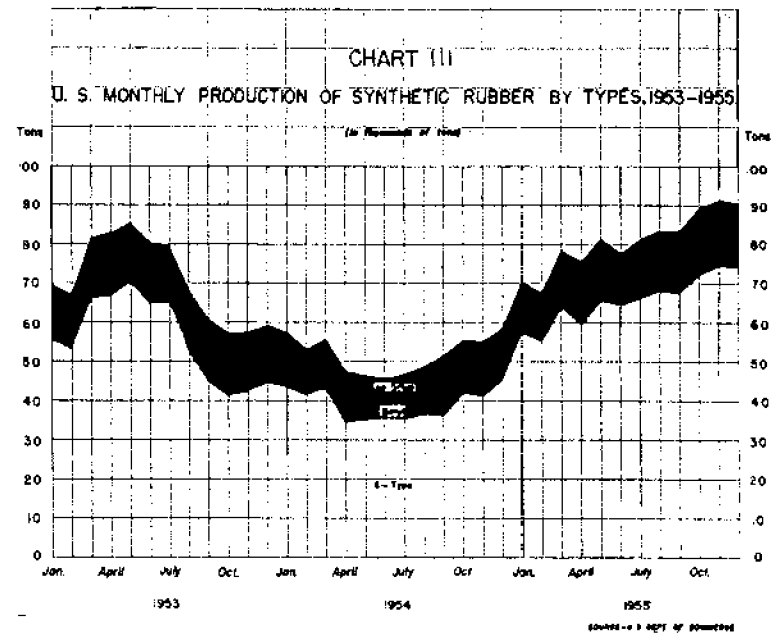
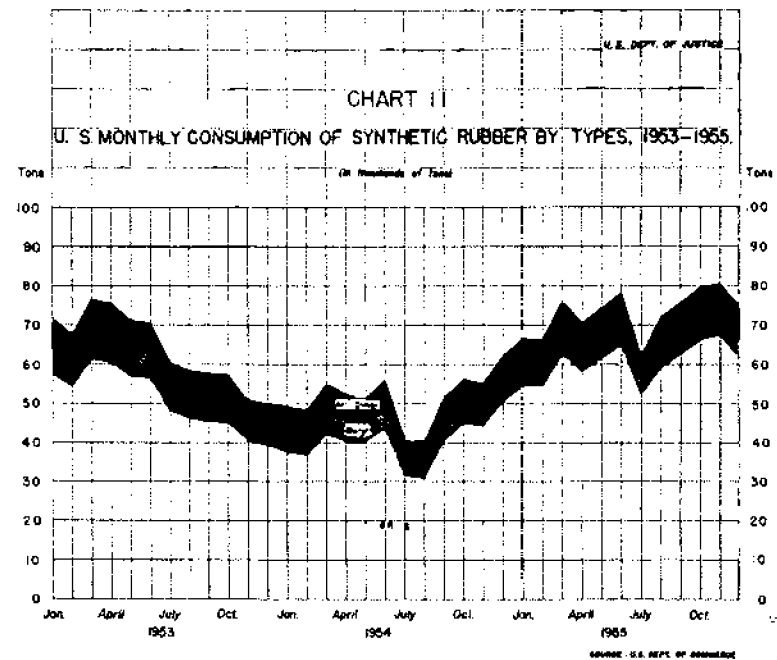
## 34 COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY

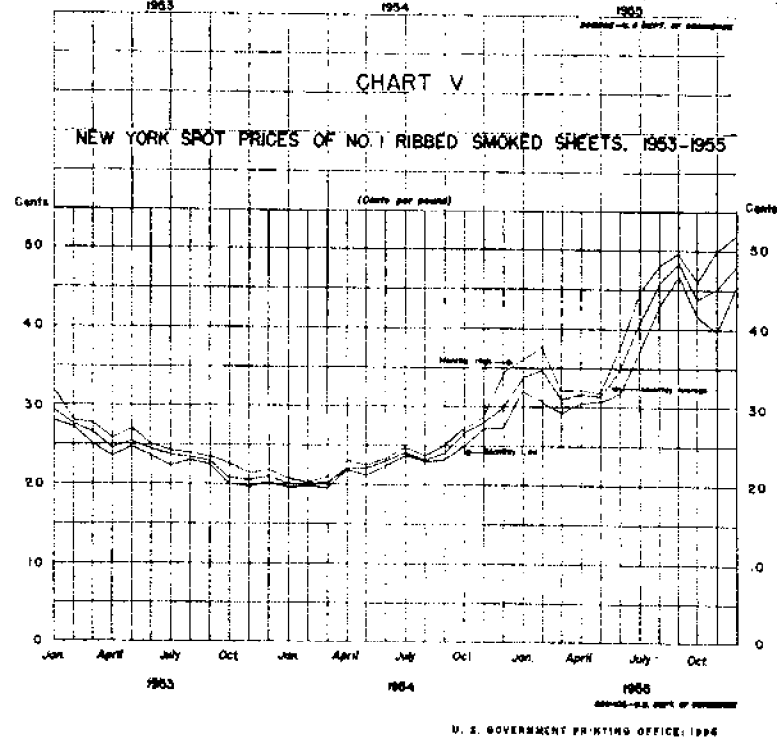
APPENDIX TABLE II.—Changes in GR-S plant capacity, by company, May–December 1955, and expansion of capacity to be completed during 1956 and 1957

Company	Capacity, May 1, 1955		Capacity, Dec. 31, 1955 <sup>1</sup>		Capacity after expansion, 1956–57 <sup>2</sup>	
	Long tons	Percent of total	Long tons	Percent of total	Long tons	Percent of total
American Synthetic Rubber Corp.	44,000	6.0	50,000	6.2	50,000	5.0
Copolymer Rubber & Chemical Corp.	49,000	6.7	56,300	6.9	67,600	6.7
The Firestone Tire & Rubber Co.	129,600	17.7	187,000	20.5	190,000	18.8
Goodrich-Gulf Chemicals, Inc.	90,000	12.3	112,500	13.8	123,000	12.2
Goodyear Synthetic Rubber Corp.	114,800	15.6	127,000	15.6	186,000	18.4
Phillips Chemical Co.	63,000	8.6	54,100	6.7	108,000	10.7
Shell Chemical Co.	80,000	12.1	89,000	11.0	100,000	9.9
Texas U. S. Chemical Co.	88,000	12.0	91,000	11.2	111,600	11.0
U. S. Rubber Co.	22,200	3.0	22,200	2.7	30,000	3.0
United Rubber & Chemical Co.	44,000	6.0	44,000	5.4	44,000	4.3
Total	738,600	100.0	813,100	100.0	1,010,200	100.0

<sup>1</sup> Disposal Report, Jan. 24, 1955 supra, note 17, p. 33.<sup>2</sup> Information furnished to the Department by the producers.<sup>3</sup> Exclusive of capacity of the Institute, W. Va. copolymer plant purchased by the company, Feb. 21, 1956.

## COMPETITION IN THE SYNTHETIC RUBBER INDUSTRY 35



[illegible]

# **EXHIBIT 5**

FINAL REPORT  
on the  
Reconstruction Finance  
Corporation



Pursuant to Section 6(c)  
Reorganization Plan No. 1 of 1957

SECRETARY OF THE TREASURY

UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON 1959





THE SECRETARY OF THE TREASURY  
WASHINGTON

May 6, 1959

Sirs:

I have the honor to submit herewith the final report on the Reconstruction Finance Corporation which is required under Section 6 (c) of Reorganization Plan No. 1 of 1957.

The report was prepared under the direction of Mr. Laurence B. Robbins, who presently is serving in the capacity of Assistant Secretary of the Treasury. Prior to confirmation in his present position, Mr. Robbins served both as Deputy Administrator and Administrator of the Reconstruction Finance Corporation and directed the liquidation of that Corporation's affairs.

*Robert B. Anderson*  
Secretary of the Treasury

To the President of the Senate

To the Speaker of the House of Representatives



## FOREWORD

The Reconstruction Finance Corporation was among the largest and undoubtedly was the most complex of all Federal lending agencies. In its operations it disbursed more than \$40 billion, and was conditionally committed to disburse many billions more under guaranties of loans and investments made by private financial institutions. Organized during a severe economic depression, the RFC passed through periods of recovery, preparedness, war, reconversion, economic expansion, another war and, finally, stability and prosperity. During all these different periods RFC played an active and very important role.

Being a corporation, with unlimited authority to borrow funds from the U.S. Treasury, the RFC had more flexibility than agencies operating under traditional Government appropriation procedures. Besides making loans of many types, the RFC subscribed for, purchased, and traded in the securities of private business enterprises, State and local government agencies and other agencies of the Federal Government. Advances and allocations were made to other Government agencies. Mortgages, on both residential and income-producing properties, were purchased and sold by RFC subsidiaries. RFC also served as liquidating agent for discontinued Government agencies and programs.

Beginning in 1940, RFC organized a group of subsidiaries to handle national defense and war programs. The operations of these subsidiaries were of types far removed from those usually associated with financial institutions. These subsidiaries developed sources for, manufactured, procured, stockpiled, and sold a long list of strategic materials and commodities. Industrial facilities for war production were built and operated. There were programs to collect and salvage scrap materials. Preclusive buying operations were conducted abroad, designed to handicap enemy powers. Subsidy payments were made to domestic producers and transporters of essential materials, not only to encourage production but to help control prices. There was a program to provide insurance against loss due to enemy action. And, finally, for a short period after World War II, an RFC subsidiary undertook to dispose of surplus war property.

An overwhelming volume of materials has accumulated on the operations of RFC and its subsidiaries. For one example, the minutes of the meetings of RFC's Board of Directors alone occupy about 250 cubic feet. Including records of the subsidiaries, the total volume

# **FINAL REPORT ON THE RECONSTRUCTION FINANCE CORPORATION**

of RFC material accepted by the National Archives was about 3,250 cubic feet. The records of testimony before committees of the Congress in hearings on matters related to RFC fill many dozens of closely printed volumes. Also, there are in the various Government record centers countless thousands of documents and pieces of correspondence related to RFC's individual loans and other transactions. To sift and collate this mass of material, to note policy changes and the shifting emphases of operations, and then to put together a comprehensive, documented exposition of RFC's manifold activities would require many years of research.

Under the provisions of Reorganization Plan No. 1 of 1957, the Secretary of the Treasury is required to submit a final report on the Reconstruction Finance Corporation on or before June 30, 1959. After careful consideration of the vast amount of material available, it was decided that the most practicable and useful form of report would be an outline of the various programs which RFC was authorized or directed by law to undertake, and a summary of the things which RFC did or did not do under those authorities. This plan has been followed. Subjective interpretations and critical analyses of RFC's operations have been avoided. It is hoped and intended that this report will serve as a source and reference book for legislators, Government officials, and students and researchers in the fields of economics, finance, and political science. With this in mind, there has been incorporated in the report a considerable volume of statistical material on RFC lending and investment functions, much of which heretofore has been unavailable in organized form.

One question frequently raised relates to whether the RFC "made a profit." Nowhere in the basic RFC legislation are there any indications that RFC was established for the purpose of making a profit. The stated purposes for RFC's existence were to deal with emergency situations and to aid in attaining broad economic goals. To judge whether or not these purposes were accomplished requires something more than measurement against a dollar yardstick. Asking whether RFC "made a profit" implies that the Corporation was regarded as a business enterprise. In its most publicized activities, the Corporation did operate as a business, but there were many RFC activities in which funds were disbursed with no expectation that any recoveries could be made. Chief among these were the grants and allocations made by RFC to other Government agencies and to States for relief and related programs during the 1930's, and, beginning in 1940, the subsidies paid and the unusual expenditures made in furtherance of the war effort. In such instances, the Congress recognized the unbusinesslike nature of these expenditures and canceled the notes which RFC had issued to the Secretary of the Treasury to obtain the funds so used.

#### FOREWORD

In the Corporation's lending activities, loans and investments were made under the requirement that there be reasonable assurance of repayment. Taken as a whole, the accounting records of the lending programs show that interest income and other revenues exceeded losses and expenses. It should be noted, however, that this did not hold true for each and every program. For example, the Corporation charged off as losses more than one-fourth of all amounts disbursed on loans to mining enterprises. Also, the administrative costs and other expenses incurred in connection with disaster loans and the smaller loans and investments of other programs were not covered by the income received from them. In most instances RFC's multimillion dollar loans and investments worked out to the Corporation's advantage, and much of the expense incurred in administering the smaller loans was absorbed in the income received from large loans and investments. In realizing upon its loans and investments the RFC benefitted from the general long-term trend of economic expansion which began shortly after the Corporation was organized. This was particularly noticeable beginning in 1940, when the economic activity generated by defense and war programs accelerated realizations upon outstanding loans and investments.

The responsibility for the necessary extensive research and the preparation of this report was assigned to Douglas S. Wilson and Thomas H. Graham, with editorial and stenographic assistance provided by Louise B. Lord and Jean H. Dougherty. All of these individuals had the benefit of many years of experience as RFC employees. Their efforts, and the assistance rendered by other former officers and employees of the Reconstruction Finance Corporation, are gratefully acknowledged.

LAURENCE B. ROBBINS,  
*Assistant Secretary of the Treasury.*



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## Origin and Succession

In a message to Congress on December 7, 1931, President Hoover said:

In order that the public may be absolutely assured and that the Government may be in position to meet any public necessity, I recommend that an emergency Reconstruction Corporation of the nature of the former War Finance Corporation should be established. It may not be necessary to use such an instrumentality very extensively. The very existence of such a bulwark will strengthen confidence. The Treasury should be authorized to subscribe a reasonable capital to it, and it should be given authority to issue its own debentures. It should be placed in liquidation at the end of 2 years. Its purpose is by strengthening the weak spots to thus liberate the full strength of the Nation's resources. It should be in position to facilitate exports by American agencies; make advances to agricultural credit agencies where necessary to protect and aid the agricultural industry; to make temporary advances upon proper securities to established industries, railways and financial institutions which cannot otherwise secure credit, and where such advances will protect the credit structure and stimulate employment.

An act creating the Reconstruction Finance Corporation was passed by the Congress, and approved on January 22, 1932. Upon signing the act, President Hoover issued this statement:

I have signed the Reconstruction Finance Corporation Act.

It brings into being a powerful organization with adequate resources, able to strengthen weaknesses that may develop in our credit, banking and railway structure, in order to permit business and industry to carry on normal activities free from the fear of unexpected shocks and retarding influences.

Its purpose is to stop deflation in agriculture and industry and thus to increase employment by the restoration of men to their normal jobs. It is not created for the aid of big industries or big banks. Such institutions are amply able to take care of themselves. It is created for the support of the smaller banks and financial institutions, and through rendering their resources liquid to give renewed support to business, industry, and agriculture.

The RFC was organized and began operations on February 22, 1932. Originally, the Corporation's principal function was to extend financial aid to agriculture, commerce, and industry through the medium of direct loans to banks, trust companies, and other financial institutions. The Corporation was also authorized to make loans to railroad companies or receivers of railroads with the approval of the Interstate Commerce Commission.

Succession of the Corporation was originally established at 10 years, but new loans could be authorized only during the first 2 years of that

#### FINAL REPORT ON THE RECONSTRUCTION FINANCE CORPORATION

period. The Congress later extended the lending authority, and broadened the Corporation's functions by including authority to purchase the capital stock of banks, insurance companies, agricultural credit corporations, and national mortgage associations. Authority was also given to RFC to make loans to business enterprises, mining interests, agricultural improvement districts, disaster victims, public school authorities, and to assist in financing the construction of public works. Further, the Corporation was directed to purchase the securities of, or make loans, advances, and allocations of funds to, various other U.S. Government corporations and agencies.

Legislation was enacted and approved in 1940 which gave RFC new responsibilities in connection with the national defense programs then being undertaken. For the most part, these defense programs were conducted through subsidiary corporations and these activities were greatly expanded during the World War II period.

The act which gave RFC its national defense responsibilities also extended the Corporation's succession to January 22, 1947. An act approved August 7, 1946, extended RFC's succession to June 30, 1947, and an act approved June 30, 1947, extended the succession to June 30, 1948. Finally, by an act approved May 25, 1948, RFC's succession was extended to June 30, 1956.

Before the date of final extension was reached, the RFC Liquidation Act became effective. This act, approved July 30, 1953, terminated the Corporation's lending powers effective on September 28, 1953, and liquidation of the Corporation's assets began at that time. The RFC Liquidation Act provided for liquidation of the Corporation in accordance with sections 9 and 10 of the amended RFC Act. Under those provisions, the RFC continued as an independent agency until June 30, 1954. Thereafter, for further liquidation, the Secretary of the Treasury succeeded to and exercised all powers, duties, and authority previously lodged in the Administrator of RFC.

On June 30, 1957, the Reconstruction Finance Corporation was abolished as provided by Reorganization Plan No. 1 of 1957.

## **Legislative Authorities and Limitations**

Under the original Reconstruction Finance Corporation Act, the Corporation's major functions were the extension of credit to agriculture, commerce, and industry through loans to banks and other financial institutions, insurance companies, agricultural credit agencies, and railroads. The Corporation's functions subsequently were modified and extended both by amendments to the original act and by provisions in independent legislation. The lending authority of the Corporation was broadened by including authority to purchase the capital stock of banks, insurance companies, agricultural credit corporations, and national mortgage associations. Authority was also given the Corporation to make loans to business enterprises, mining interests, disaster victims, and public school authorities, and to assist in financing the construction of public works. It also was authorized and directed to allocate funds to, to make loans and advances to, and to purchase the securities of, various U.S. Government corporations and agencies.

During the emergency period beginning in 1940, and during World War II, the responsibilities of the Corporation were considerably augmented, principally on the basis of authority derived, directly or indirectly, from section 5d of the RFC Act, as amended, from the First War Powers Act, and from the Emergency Price Control Act of 1942. In order to aid the Government in its national defense program, the Corporation was authorized to engage in financing of plant conversion and construction, to acquire and construct and to own and operate war plant facilities, to make subsidy payments, to deal in and to stockpile strategic and critical materials, to administer the war damage insurance program, and to conduct a great variety of other activities unrelated to its normal lending operations.

By legislation approved June 30, 1947, the Corporation's lending powers were substantially curtailed and its wartime functions were terminated, except with respect to the programs for the production of synthetic rubber, tin, and abaca fiber. The lending powers thereafter were confined to business enterprises, including railroads and air carriers, financial institutions, municipalities and political subdivisions of States and Territories, and disaster victims. Except for certain lending authorities assigned to the Corporation under provisions of the Defense Production Act and the Federal Civil Defense Act of

## FINAL REPORT ON THE RECONSTRUCTION FINANCE CORPORATION

1950, the aforementioned lending powers remained unchanged until enactment of the RFC Liquidation Act.

In the following description, the legislative authorities of RFC are shown under four general headings: Part I deals with the authorities for the Corporation's so-called "normal" lending and investment functions. Part II covers the legislative authorities for allocations and loans made to other Government agencies by direction of the Congress. Part III gives the authorities for the Corporation's non-lending activities, including those undertaken in connection with national defense and wartime programs. Part IV covers the legislative authorities and restrictions having to do with the Corporation's financing. A list of RFC's legislative authorizations according to dates of approval, statute references, and public law numbers will be found in appendix A.

### Part I—Lending and Investment Functions

#### 1. BANKS AND OTHER FINANCIAL INSTITUTIONS

##### (a) Banks and Trust Companies

*RFC Act—approved January 22, 1932.*—Section 5 of the original act authorized RFC to make loans to banks, savings banks, and trust companies, including loans secured by the assets of any banks that were closed or in process of liquidation to aid in the reorganization or liquidation of such banks.

All loans made under the foregoing provision were to be "fully and adequately secured," and maturities could not exceed 3 years. The loans to any one corporation could not exceed 5 percent (reduced on July 2, 1932, to 2½ percent) of RFC's authorized capital stock and borrowing authority.

An act approved June 19, 1934, permitted maturities up to 5 years for loans made under this section 5. In 1935, the maturity limitation was changed to a deadline of January 31, 1945. In 1940, this maturity deadline was extended to January 31, 1955.

*Emergency Bank Act—approved March 9, 1933.*—Section 304 of this act provided that if in the opinion of the Secretary of the Treasury a bank needed funds for capital purposes, he could, with the approval of the President, request the RFC to subscribe for preferred stock of such bank or to make a loan secured by such stock. By an amendment of March 24, 1933, this power was limited to cases where the preferred stock was nonassessable. In cases where nonassessable stock could not be issued, RFC was authorized to lend on capital notes or debentures. Under the provisions of this act, no limitations similar to those of section 5 of the RFC Act were imposed.

## LEGISLATIVE AUTHORITIES

Import Bank to enable that bank to assist in the development of resources of countries in the Western Hemisphere. By amendments to section 9 of an act approved January 31, 1935, RFC was authorized to continue to supply capital to the bank through loans or subscription for preferred stock.

## 5. FOREIGN GOVERNMENTS

## (a) General Authority

*An act approved June 10, 1941*, added a new subsection (4) to section 5d of the RFC Act which authorized the Corporation to make loans to any foreign government for the purpose of achieving the maximum dollar exchange value in the United States. Such loans could be made only on the request of the Federal Loan Administrator, with the approval of the President. A loan to Great Britain was made under this authority.

## (b) Specific Authority

*By an act of August 7, 1946*, RFC was authorized to lend up to \$75 million to the Philippine Republic after consultation with the National Advisory Council on International Monetary and Financial Problems. A loan of \$70 million subsequently was made under this authority.

*An act approved May 22, 1947*, directed RFC to make advances up to \$100 million for aid to Greece and Turkey. *By an act approved May 31, 1947*, RFC was directed to advance up to \$75 million for war-devastated areas. *An act approved December 17, 1947*, directed the Corporation to make advances of \$150 million for aid to European countries. *In the act approved April 3, 1948*, the RFC was directed to advance \$50 million for aid to China, \$50 million for aid to Greece and Turkey, and \$1 billion for foreign economic aid. *An act approved August 11, 1948*, directed the Corporation to make available \$25 million for construction of the United Nations Headquarters building. *The act approved March 24, 1949*, directed the Corporation to advance \$8 million for the relief of Palestine refugees. *By an act approved April 19, 1949*, the Corporation was directed to advance \$1 billion to carry out the provisions of title I of the Economic Cooperation Act of 1948. *The act approved February 14, 1950*, directed the RFC to advance \$20 million for Far Eastern relief. *And the act approved June 5, 1950*, directed the Corporation to advance an additional \$8 million for the relief of Palestine refugees.

The foregoing measures were to be administered under the direction of the President, and RFC was used only as a means of providing immediate temporary financing. Funds for these advances were bor-

#### FINAL REPORT ON THE RECONSTRUCTION FINANCE CORPORATION

rowed by RFC from the Treasury, without interest, and the sums were made available to the Secretary of State and the Administrator of ECA. The advances were repaid from funds specifically appropriated for such purposes.

The RFC was also authorized and directed to make similar advances under the Mutual Assistance Act of 1949 and the India Emergency Food Aid Act of 1951, but no advances were required to be made under these acts.

### Part III—Nonlending Functions

*An act approved June 25, 1940*, added to section 5d of the RFC Act new paragraphs to cover aid to the Government in its national defense program. Subsection (2) of this act authorized the Corporation to create or to organize a corporation or corporations for the purpose of producing, acquiring, and carrying strategic and critical materials, and for the construction of plants to be used in the manufacture of equipment and supplies necessary to the national defense program. *Section 4(b)(3) of an act approved June 10, 1941*, broadened this authority to include, among other things, the authority to take such other action as might be deemed necessary to expedite the national defense program.

There were eight subsidiary corporations organized by RFC under the aforementioned authority and through these the Corporation's wartime programs were conducted.

Following the close of World War II, three of the production programs which had been undertaken by RFC's wartime subsidiaries were continued on an active basis. These were: the program for production and sale of synthetic rubber undertaken by the Rubber Reserve Corporation; the program for production and sale of tin undertaken by Metals Reserve Corporation; and the program for the production and sale of abaca fiber undertaken by Defense Supplies Corporation.

#### Synthetic Rubber

*The act of March 29, 1947*, continued the powers, functions, duties, and authority relating to the manufacture and sale of synthetic rubber until March 31, 1948, or until permanent legislation was adopted.

*The Rubber Act of 1948*, approved March 31, 1948, and the acts approved June 24, 1950, and June 23, 1952, further extended the authority to manufacture and sell synthetic rubber.

*The Rubber Producing Facilities Disposal Act*, approved August 7, 1953, provided for the disposal of the Government's synthetic rubber plants to private industry. Section 107 of the RFC Liquidation

## LEGISLATIVE AUTHORITIES

Act directed that all authority of the RFC under the Rubber Act of 1948 be transferred from RFC not later than June 30, 1954. By Executive Order 10539, effective June 30, 1954, the synthetic rubber program was transferred from RFC to Federal Facilities Corporation.

**Tin**

*An act approved July 25, 1946*, authorized RFC to continue operation of the Government-owned tin smelter and the program for purchase and sale of tin ores and refined tin until June 30, 1947. Subsequent legislation relating to the operation and continuation of the tin program was contained in the acts approved June 28, 1947, June 29, 1948, June 30, 1949, and August 21, 1950. Section 107 of the RFC Liquidation Act, approved July 30, 1953, directed that all functions of RFC relating to the tin program be transferred from RFC. In Executive Order 10539, the President transferred the tin program to Federal Facilities Corporation. The act approved June 22, 1956, provided for operation of the tin smelter until January 31, 1957, and also directed Federal Facilities Corporation to take steps to sell or lease the tin-producing facilities. After negotiations, the smelter was sold on January 3, 1957.

**Abaca**

The agreements which had been entered into with the contractor operating the abaca plantations established by Defense Supplies Corporation in Central America were extended until December 1948. Abaca continued to be designated as a strategic material, and operation of the plantations was continued under the general authority contained in section 12 of the act approved June 30, 1947. *The Abaca Production Act of 1950*, approved August 10, 1950, provided for continuation of the program until March 31, 1960, unless earlier termination was directed by the President or the Congress. In the RFC Liquidation Act, it was provided that the abaca program be transferred from RFC. General Services Administration was named by the President to receive the abaca program in Executive Order 10539, effective June 30, 1954.

**Smaller War Plants Corporation**

Smaller War Plants Corporation (an independent agency) was created by an act approved June 11, 1942. The purpose of the act was to mobilize the productive capacity of all small business concerns to augment war production. To accomplish that purpose, SWPC was authorized to make loans to small business, to purchase land and equipment and lease it to small business, and to enter into contracts

#### MANAGEMENT AND ORGANIZATION

office. However, as the loan agencies became seasoned in lending activities, their delegation of authority was expanded.

Generally, the loan agency managers had authority, under certain conditions, to approve direct business loans up to \$100,000, and loans in which RFC participated with banks up to \$350,000. If an application was for an amount greater than the agency manager was authorized to approve, or if an application, regardless of amount, was recommended for decline, it was referred to the Washington office, together with all recommendations, for review and further consideration. Other functions of the loan agencies included the servicing and administration of loans made in their respective districts and, after January 1948, each agency performed its own fiscal functions. Prior to that time the accounting for the agencies was maintained in the Washington office with the Federal Reserve banks acting as fiscal agents.

The administrative details in connection with the Corporation's responsibilities relating to the national defense programs were handled in part at the Washington office and in part through the loan agencies. In the Washington office these new responsibilities were administered primarily through the wartime subsidiary corporations. However, in the loan agencies the managers were required to accept many new responsibilities, such as supervising the performance of others under contracts for the acquisition, transportation, warehousing, and disposal of commodities; the collection of war-plant rentals; the auditing and settlement of subsidy claims; and the supervision of the activities of residential housing projects operated in conjunction with certain of the Corporation's war plants.

The 31 RFC loan agencies were located in the following cities:

Atlanta, Ga.	Jacksonville, Fla.	Philadelphia, Pa.
Birmingham, Ala.	Kansas City, Mo.	Portland, Oreg.
Boston, Mass.	Little Rock, Ark.	Richmond, Va.
Charlotte, N.C.	Los Angeles, Calif.	St. Louis, Mo.
Chicago, Ill.	Louisville, Ky.	Salt Lake City, Utah
Cleveland, Ohio	Minneapolis, Minn.	San Antonio, Tex.
Columbia, S.C.	Nashville, Tenn.	San Francisco, Calif.
Dallas, Tex.	New Orleans, La.	Seattle, Wash.
Denver, Colo.	New York, N.Y.	Spokane, Wash.
Detroit, Mich.	Oklahoma City, Okla.	
Houston, Tex.	Omaha, Nebr.	

The Corporation also at times had branch offices located in the following cities:

Anchorage, Alaska	Phoenix, Ariz.
El Paso, Tex.	Pittsburgh, Pa.
Helena, Mont.	San Juan, P.R.
Memphis, Tenn.	

# **FINAL REPORT ON THE RECONSTRUCTION FINANCE CORPORATION**

## **Subsidiaries of Reconstruction Finance Corporation**

The Corporation had two subsidiary corporations and one other affiliate (Disaster Loan Corporation) engaged in lending activities, and eight subsidiary corporations engaged in World War II activities.

The two subsidiaries engaged in lending (the RFC Mortgage Company and the Federal National Mortgage Association) were created and their capital stock was acquired under the authority conferred upon RFC by section 5(c) of the RFC Act in order to assist in the reestablishment of a normal mortgage market.

The RFC Mortgage Company was organized under the laws of the State of Maryland on March 14, 1935. The Federal National Mortgage Association was chartered by the Federal Housing Administrator on February 10, 1938. Its organization by RFC was directed by the President of the United States.

Specific authority to create or organize corporations was granted to RFC by the provisions of an act approved June 25, 1940, in order to aid the Government in its national defense program. The following seven wartime subsidiaries were created by RFC pursuant to this authority:

Defense Plant Corporation	War Damage Corporation
Defense Supplies Corporation	Petroleum Reserve Corporation
Metals Reserve Company	U.S. Commercial Company
Rubber Reserve Company	

The Corporation also acquired the capital stock of Rubber Development Corporation (formerly Pacific Development Co., Inc.), a corporation of the State of Delaware. This capital stock was purchased by RFC from Defense Supplies Corporation, an RFC war subsidiary which had advanced funds to finance the Pacific Development Co., Inc., and had acquired the capital stock when that enterprise became inactive.

Immediately after June 30, 1945, the war subsidiaries which were being administered by RFC, with the exception of War Damage Corporation, were dissolved by law and their assets, liabilities, and functions were merged with those of the RFC. Disaster Loan Corporation, an affiliated lending enterprise, the stock of which was wholly owned by the Treasury of the United States, and the operations of which had been under RFC administration, also was dissolved and merged with RFC by the same enactment. Liquidation of War Damage Corporation was completed by June 30, 1949. The RFC Mortgage Company was dissolved, effective June 30, 1947, and its assets and liabilities were merged with those of RFC for liquidation. The Federal National Mortgage Association was transferred to the Housing and Home Finance Agency effective September 7, 1950,

#### MANAGEMENT AND ORGANIZATION

under the provisions of Reorganization Plan No. 22 of 1950. Petroleum Reserve Corporation became War Assets Corporation on November 15, 1945. Rubber Development Corporation's charter expired on June 30, 1947, and the powers vested in U.S. Commercial Company expired on June 30, 1948. The three subsidiaries last named had been under the management supervision of the Foreign Economic Administration prior to September 27, 1945.

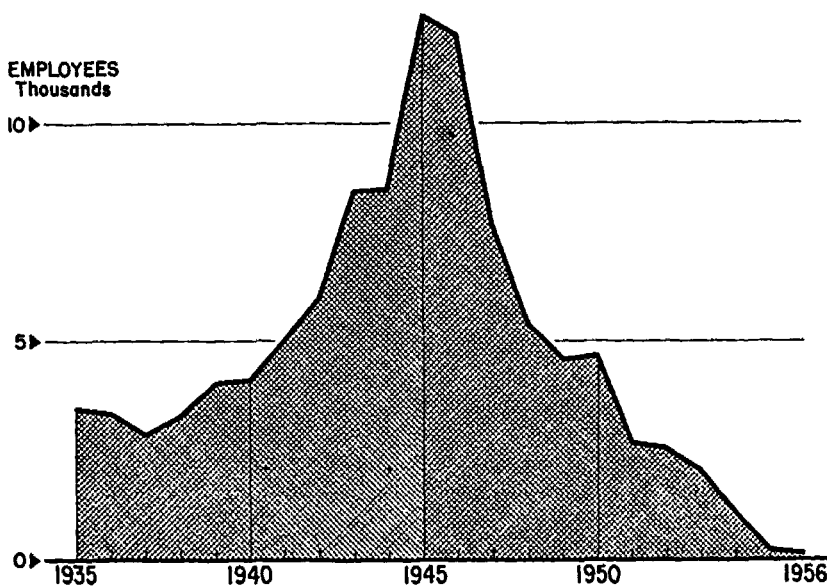
#### Relationship of Federal Loan Agency to RFC

During the period July 1, 1939, to June 30, 1947, RFC was a component of the Federal Loan Agency, which was organized by act of Congress to coordinate the functions and activities of various Government lending agencies. This Agency was headed by an Administrator until July 22, 1945, and from that date the duties of the Administrator were discharged by the Chairman of the Board of Directors of RFC. Because the Agency had been reduced to a mere administrative superstructure over the Board of Directors of RFC, it was abolished by Congress on June 30, 1947.

#### Employment

The number of employees on RFC's payroll varied widely throughout the years, generally in accord with expansion and contraction in the volume of the Corporation's activities. The chart below shows the number of RFC employees on June 30 of the years from 1935 to 1956.

**RFC EMPLOYMENT (As of June 30, 1935-1956)**



## SECTION VI—FINANCIAL

### A. *Plant Ownership*

All of the government-owned plants in the synthetic rubber program were constructed under the auspices of Defense Plant Corporation (another subsidiary of RFC) at the request of Rubber Reserve Company, subject to a written indemnity agreement executed by Rubber Reserve Company. The plants are leased by Defense Plant Corporation to the various operating companies at a nominal rental of one dollar per year. As a matter of general governmental policy established at the beginning of the program the lease agreements contain no purchase option in favor of the lessee-operator. As a result of this fixed policy the government is in a position to determine the final disposition of the government-owned plants in the synthetic rubber program, which represent over 95% of the total synthetic rubber production capacity of the country. Such final disposition will be determined by the government in the light of the amount of synthetic rubber production required, the quality of synthetic rubber as compared with natural rubber, the cost of production of synthetic rubber as compared with landed cost of natural rubber, and other post-war conditions.

### B. *Operating Agreements and Fees*

All of the contracts covering operations conducted in government-owned facilities are on a "cost-plus-a-management-charge" basis with the exception of the agreements covering the operation of two butadiene plants having a combined rated capacity of 150,000 tons per year operated by Neches Butane Products Company and Sinclair Rubber, Inc., which latter contracts are on an actual cost basis with no management charge included. Since the operations were of unprecedented size and character the management charge in each case was determined on the basis of projected operations without any actual operating experience to serve as a guide. The management charge in each case is in lieu of reimbursement for expenses for executive management and general overhead not susceptible of being allocated to the direct costs of operation. In the case of the butadiene and styrene agreements, a part of the charge is segregated to serve as a royalty allowance for patent rights and technical information used in the operations conducted under the agreement, this being integrated with the provisions of the related technical information interchange agreements previously mentioned so that such allowance is either retained by the operating company or paid in whole or in part to some other party to the interchange agreement, depending upon whose patent rights and technical information are employed in such operations. Each of the management charges is graduated downward based upon incremental production so that all companies operating the same type of plants receive the same fee for equal tonnage. The original charge payable for operation of the copolymer plants was subsequently reduced out of recognition for the large increase in the size of the GR-S program over that which was contemplated at the time the original management charge schedule was established.

Materials produced in privately-owned plants are for the most part purchased on a negotiated-price basis.

### C. *Distribution Prices*

As mentioned previously, Rubber Reserve Company became the sole distributor of crude rubber for the entire country in June 1941. The base price established for crude rubber distribution was  $22\frac{1}{2}\text{¢}$  per pound. In 1942 Rubber Reserve Company

likewise became the sole distributor of all synthetic rubber produced in government-owned facilities. For the purpose of such distribution, Rubber Reserve Company adopted symbols to denote the various types of synthetic rubber produced and sold by Rubber Reserve Company, such symbols being as follows:

- GR-S.....Synthetic rubber of the butadiene-styrene-copolymer type (the symbol standing for "Government rubber—styrene");
- GR-M.....Neoprene type (the symbol standing for "Government rubber—Monovinylacetylene");
- GR-I.....Butyl rubber type (the symbol standing for "Government rubber—*isobutylene*");
- GR-A.....Synthetic rubber of the butadiene-acrylonitrile-copolymer type (the symbol standing for "Government rubber—acrylonitrile").

Other symbols have been designated for synthetic rubber representing variations of the foregoing standard types, some of such synthetic rubbers being of an experimental character.

The following prices were established at the beginning of the program and prevailed during the period from 1942 to April 1, 1943:

- GR-S.....50¢ per pound
- GR-M.....65¢ per pound
- GR-I.....33¢ per pound

When synthetic rubber production reached large proportions in March 1943, consultations were had with representatives of OPA for the purpose of establishing new prices which would be satisfactory to OPA from the standpoint of war-time price control measures. It was the view of OPA that the domestic rubber economy was geared to the established price of  $22\frac{1}{2}$ ¢ per pound for crude rubber and that the prices to be established for synthetic rubbers should bear a direct relationship to this price. In applying such standard to the prices for synthetic rubbers, OPA gave due recognition to the different characteristics of such rubbers, and the following prices were established to reflect the formulae adopted by OPA:

- GR-S..... $18\frac{1}{2}$ ¢ per pound
- GR-I..... $15\frac{1}{2}$ ¢ per pound

The representatives of OPA agreed that it was not necessary to apply such price controls to synthetic rubbers going into the fabrications of products purchased by the various procurement agencies of the Federal Government, which agencies consist of the War Department, Navy Department, the Procurement Division of the Treasury Department (which makes purchases for Lend-Lease), and U. S. Maritime Commission. After consultation with these procurement agencies, Rubber Reserve Company established an arrangement pursuant to which it would receive from each such agency monthly payments at the rate of  $17\frac{1}{2}$ ¢ per pound of natural or synthetic rubber used in products purchased by such agencies based upon monthly consumption reports submitted to Rubber Reserve Company by the rubber manufacturing companies.

Consistent with this arrangement, effective as of July 1, 1943, OPA established a price of  $27\frac{1}{2}$ ¢ per pound for GR-M used in civilian orders and the government procurement agencies were thereupon required to pay to Rubber Reserve Company the same differential of  $17\frac{1}{2}$ ¢ per pound for GR-M used in products purchased by such agencies.

As a result of this arrangement, a "two-price" system came into being with the lower price in each case being applicable to natural or synthetic rubbers used in

# EXHIBIT 6

CHARTER  
OF  
DEFENSE PLANT CORPORATION

In order to aid the Government of the United States in its National Defense Program, Reconstruction Finance Corporation, for the purpose of creating a corporation with the powers hereinafter stated, pursuant to the authority contained in Section 5d of the Reconstruction Finance Corporation Act, as amended, the creation of such corporation having been requested by the Federal Loan Administrator with the approval of the President, declares that:

FIRST, The name of the Corporation shall be "DEFENSE PLANT CORPORATION".

SECOND, The location of the principal office of the Corporation shall be in the City of Washington, District of Columbia.

THIRD, The objects, purposes and powers of the Corporation shall be:

- (a) To purchase, lease or otherwise acquire real estate and interests in real estate, to purchase, lease or otherwise acquire and to build and expand plants and facilities, and to purchase, lease, produce or otherwise acquire and to repair, re-build and alter equipment, supplies and machinery, for the manufacture of arms, ammunition and implements of war;
- (b) To use, lease, license, or otherwise arrange for the use of such real estate, plants, facilities, equip-

ment, supplies and machinery, for the manufacture of arms, ammunition and implements of war and the production of equipment, supplies and machinery usable in such manufacture; and

- (c) If the President of the United States finds that it is necessary for the Corporation to engage in the manufacture of arms, ammunition and implements of war, to engage in such manufacture itself.

The Corporation shall have power to do all things incidental to the foregoing and necessary or appropriate in connection therewith, including, but without limitation, the power to borrow and hypothecate, to adopt and use a corporate seal, to make contracts, to acquire, hold and dispose of real and personal property necessary and incidental to the conduct of its business, and to sue and be sued in any court of competent jurisdiction. The Corporation, including its franchise, its capital, reserves, surplus, income and assets shall be exempt from all taxation now or hereafter imposed by the United States, or any Territory, dependency, or possession thereof, or by any State, county, municipality, or local taxing authority, except that any real property of the Corporation shall be subject to State, Territorial, county, municipal or local taxation to the same extent according to its value as other real property is taxed; the Corporation shall be entitled to the free use of the United States mails; and in addition to or in limitation of the privileges and immunities belonging to it as an instrumentality of the

Corporation Act, as amended.

FOURTH, The total authorized capital stock of the Corporation shall be Five Million Dollars (\$5,000,000), of which One Million Dollars (\$1,000,000) shall be paid in immediately and the balance as called. Such stock shall be of one class and shall be issued for cash only. Reconstruction Finance Corporation shall subscribe for all of the capital stock of the Corporation and such stock shall not be transferable.

FIFTH, The Corporation shall have existence until dissolved by Reconstruction Finance Corporation.

SIXTH, The stockholders shall not be liable for the debts, contracts or engagements of the Corporation except to the extent of unpaid stock subscriptions.

SEVENTH, The Corporation shall be managed by its Board of Directors, officers and agents pursuant to this Charter and the provisions of the By-laws of the Corporation as prescribed by Reconstruction Finance Corporation.

EIGHTH, This Charter and the By-laws may be amended at any time by Reconstruction Finance Corporation.

IN WITNESS WHEREOF, Reconstruction Finance Corporation has caused this Charter to be signed by its executive officer, Chairman

of its Board of Directors, attested by its Secretary, and has caused  
its seal to be hereunto affixed this 22nd day of August, 1940.

RECONSTRUCTION FINANCE CORPORATION

By (Signed) Emil Schram  
Chairman

ATTEST:

(Signed) G. R. Cooksey  
Secretary

# **EXHIBIT 7**

*Published in Federal Register of June 19, 1941.  
Volume 6, Number 117. [67.R.2970]*

CHARTER  
of  
RUBBER RESERVE COMPANY

WHEREAS, In order to aid the government of the United States in its national-defense program, Reconstruction Finance Corporation is authorized, pursuant to Section 5d of the Reconstruction Finance Corporation Act, as amended by the Act approved June 25, 1940, when requested by the Federal Loan Administrator, with the approval of the President, to create corporations with power to produce, acquire and carry strategic and critical materials, as defined by the President; and

WHEREAS, The President has defined rubber as a strategic material; and

WHEREAS, The Federal Loan Administrator has requested and the President has approved the creation of a corporation of the character described in paragraph THIRD hereof;

NOW, THEREFORE, It is stated that:

FIRST, Reconstruction Finance Corporation does hereby create a corporation to be known as RUBBER RESERVE COMPANY.

SECOND, the location of the principal office of the corporation shall be in the City of Washington, District of Columbia.

THIRD, the objects and purposes of the corporation shall be to perform all acts and transact all business which is permitted legally to be done, performed, and transacted in connection with

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the buying, selling, acquiring, storing, carrying, producing, processing, manufacturing and marketing of natural raw or cured rubber, as well as related materials and substances; and the corporation shall have power to do all things incidental thereto and necessary or appropriate in connection therewith, including, but without limitation, the power to borrow and hypothecate, to adopt and use a corporate seal, to make contracts, to acquire, hold and dispose of real and personal property necessary and incident to the conduct of its business and to sue and be sued in any court of competent jurisdiction. The corporation, including its franchise, its capital, reserves, surplus, income and assets shall be exempt from all taxation now or hereafter imposed by the United States, or any Territory, dependency, or possession thereof, or by any State, county, municipality, or local taxing authority, except that any real property of the corporation shall be subject to State, Territorial, county, municipal or local taxation to the same extent according to its value as other real property is taxed; the corporation shall be entitled to the free use of the United States mails; and, in addition to or in limitation of the privileges and immunities belonging to it as an instrumentality of the United States government, the corporation shall in all other respects be possessed of such privileges and immunities as are conferred upon Reconstruction Finance Corporation under the Reconstruction Finance Corporation Act, as amended.

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FOURTH, the total authorized capital stock of the corporation shall be Five Million Dollars (\$5,000,000), consisting of 50,000 shares of the par value of \$100 each, of which One Million Dollars (\$1,000,000) shall be paid in immediately and the balance as called. Such stock shall be of one class, shall be non-assessable and shall be issued only for cash fully paid. Reconstruction Finance Corporation shall subscribe for all of the capital stock of the corporation. Such stock shall not be transferable, except with the approval of Reconstruction Finance Corporation (and then only to the extent that Reconstruction Finance Corporation deems it desirable that any such stock be transferred to members of the rubber industry for the purpose of furnishing assurance of their cooperation in the conduct of the activities of the corporation, facilitating the ultimate liquidation of the assets of the corporation, and thereby protecting the interests of the United States Government acting by and through Reconstruction Finance Corporation).

FIFTH, the corporation shall have existence until dissolved by Reconstruction Finance Corporation.

SIXTH, the stockholders shall not be liable for the debts, contracts or engagements of the corporation except to the extent of unpaid stock subscriptions.

SEVENTH, the corporation shall be managed by its Board of Directors, officers and agents pursuant to this Charter and the

-4-

provisions of the By-laws of the corporation as prescribed by Reconstruction Finance Corporation.

EIGHTH, this Charter and the By-laws may be amended at any time by the Board of Directors of the corporation, upon approval of Reconstruction Finance Corporation.

IN WITNESS WHEREOF, Reconstruction Finance Corporation has caused this Charter to be signed by its executive officer, Chairman of its Board of Directors, attested by its Secretary, and has caused its seal to be hereunto affixed this 28th day of June, 1940.

RECONSTRUCTION FINANCE CORPORATION

By (Signed) Emil Schram  
Chairman

ATTEST:

(Signed) G. R. Cooksey  
Secretary

# EXHIBIT 8

**REPORT ON THE  
RUBBER PROGRAM  
1940-1945**



**RUBBER RESERVE COMPANY**

*February 24, 1945*

**RUBBER RESERVE COMPANY**  
**WASHINGTON, D. C.**

February 24, 1945.

To The Board of Directors:

Since the date of its creation on June 28, 1940, Rubber Reserve Company has been engaged in the procurement of rubber for the national defense and war needs of the Government. It began its activities by accumulating a stockpile of natural rubber and later extended them to cover scrap rubber and the production of synthetic rubber. In February of 1943 the procurement of natural rubber from foreign countries, at the request of the Rubber Director, was delegated to Rubber Development Corporation, but the distribution and sale of natural rubber still falls within the scope of Rubber Reserve Company's functions.

One of the most important activities of Rubber Reserve Company at the present time is the supervision of the operation of fifty-one government-owned plants in the synthetic rubber program, which are in operation on a large scale and which have made possible the production of 737,000 tons of synthetic rubber in 1944 and are being called upon to produce almost 1,000,000 tons in 1945 and 1,200,000 tons in 1946. The production for 1944 was far in excess of the greatest quantity of natural rubber ever consumed in this country during any year prior to the war, and the scheduled production for 1946 will exceed the greatest quantity of natural rubber ever consumed by the entire world prior to the war.

I am enclosing a copy of a report entitled "Report on the Rubber Program 1940-1945" which covers all of Rubber Reserve Company's activities from the date of its creation to the present time. Because the report has considerable length, owing to the necessary discussion of many technical and operational phases, a short summary has been included at the beginning for quick reference.



S. T. CROSSLAND,  
Executive Vice President

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## SECTION I—SUMMARY

### *Organization*

Prior to June 1940 the Procurement Division of the Treasury Department was the only agency of the Government, aside from the War and Navy Departments, which had authority to acquire strategic and critical materials. On June 25, 1940 the RFC Act was amended so as to authorize it to create corporations for the purpose of acquiring strategic and critical materials as defined by the President. On June 28, 1940 the President designated rubber as a strategic and critical material and on the same date Rubber Reserve Company was created by Reconstruction Finance Corporation. The original purpose of Rubber Reserve Company was to buy and accumulate a stockpile of natural rubber as a safeguard against possible war in the Far East. The later activities of Rubber Reserve Company, as explained in this report, have been predominantly concerned with the Government's synthetic rubber program. These activities have been of a unique character in comparison with activities of other Government agencies and even other RFC corporations in that Rubber Reserve Company has had the direct responsibility for the formulation, correlation and operation of a program enveloping a new industry of great magnitude from the date of its inception. Rubber Reserve Company has consulted with and received recommendations from other interested agencies of the Government, including War Production Board, Petroleum Administration for War, Office of Price Administration, and the War and Navy Departments, but the contractual and operating arrangements in the program have been the independent responsibility of Rubber Reserve Company.

### *The Early Rubber Situation*

Prior to 1940 the maximum use of natural rubber in the United States was 592,000 long tons per year; in 1940, 648,500 tons were consumed, and in 1941, 775,000 tons were consumed. On December 7, 1941, hostilities commenced which soon resulted in cutting off the source of 90% of our natural rubber supplies. At the end of 1939 stocks of natural rubber in this country had been allowed to become reduced to only 125,800 tons in the face of a threatening international situation. The problems facing the United States involved, first, the building up of a natural rubber stockpile as insurance against interruption of supply, and, second, developing a source of rubber independent of imports from abroad.

### *Activities in the Natural Rubber Field*

Agreements were consummated between Rubber Reserve Company and the International Rubber Regulation Committee providing for a marked increase in the rate of importation of natural rubber, and, in addition, barter agreements had been arranged covering the exchange of surplus cotton for natural rubber. As the result of these activities the imports of natural rubber during 1940 and 1941 aggregated about 1,835,000 long tons, and in spite of increased consumption, the natural rubber stockpile was increased from the low of 1939 to a maximum of 630,356 tons at the end of April 1942. With the cooperation of the State Department and other interested Government agencies, agreements were entered into with private interests in Liberia and with the Governments of seventeen South and Central American countries to facilitate the production, purchase, and importation of both plantation and wild rubber crops. In the three years, 1942, 1943, and 1944, a total of 113,044 long tons of rubber

such action having been taken because of the increased demands for benzene in other essential war programs.

The authorization to Koppers included the construction of a power plant which was suitable in size to service an 80,000-ton plant producing butadiene from alcohol, plus a plant producing 37,500 tons of styrene. Moreover, the original site selected for the plant was on the Ohio River and within a principal alcohol-producing area, which made it excellently situated for the location of a plant producing butadiene from alcohol. As already mentioned the information furnished by WPB with respect to the availability of alcohol for the synthetic rubber program made possible an increase in the proposed productive capacity of butadiene from alcohol, and the authorization issued to Koppers in July 1942 with respect to an 80,000-ton plant producing butadiene from alcohol was a part of this general increase.

### 3. *From Petroleum*

The expanded program of 705,000 tons of GR-S which was determined during the first half of 1942 required a greatly increased program for the production of butadiene, and this in turn necessitated the greater use of petroleum products as its raw material. The principal petroleum product which could be used for this purpose was butylene (a material which is also used in the manufacture of aviation gasoline). The earliest projects included in the petroleum butadiene program in January 1942 contemplated the manufacture of butadiene from butylenes in two plants, one located at Baton Rouge, Louisiana, having an annual capacity of 15,000 tons, and the other at Baytown, Texas, having an annual capacity of 30,000 tons, such plants to be constructed and operated by Standard Oil Company of Louisiana (now Louisiana Division of Standard Oil Company of New Jersey) and Humble Oil and Refining Company, respectively, using a process developed by their affiliate, Standard Oil Development Company. The plants in these two cases were to be located adjacent to existing refineries and were to utilize butylenes made available from refinery operations. In addition to the government-financed butadiene plant Standard Oil Company of Louisiana was already operating and completing two privately-owned plants for the production of butadiene at the same location with a combined annual capacity of approximately 9,100 tons, these plants employing a different process and different starting materials, and Rubber Reserve Company arranged to purchase a portion of the output of such plants.

Another of the earlier authorizations in the petroleum butadiene program was that issued to Phillips Petroleum Company in January of 1942 contemplating the construction of a plant at Borger, Texas for the production of butadiene from butane, having a designed capacity of 45,000 tons and employing a process under development by Phillips. This plant was located in the heart of a natural gas area and was designed to utilize butane gas.

An early plant authorization in the petroleum butadiene program was issued to Shell Chemical Company (now Shell Chemical Division of Shell Union Oil Corporation) for the manufacture of butadiene from butylenes, to be located near Los Angeles, California, and to be within close proximity to an existing refinery of Shell Oil Corporation, such plant employing the process developed by Standard Oil Development Company.

The survey of the general availability of petroleum products for use as raw materials for increased butadiene manufacture necessitated a related survey of suitable locations for new plants and companies to operate them. Because butylenes were available only in limited quantities it appeared necessary to consider the construction of facilities to produce butylenes from butane, which was available at refinery locations in the Southwest and at refining areas near Chicago. The combined

facilities for the dehydrogenation of butane to butylene and the manufacture of butadiene therefrom required a large amount of construction materials which competed with the demands of the aviation gasoline program and other phases of the war effort for the same general type of refinery equipment. As a consequence it was deemed expedient to design such projects on a sufficiently large basis to make best and fullest use of the required construction materials, raw materials, and technical personnel familiar with the type of operations involved. Three such plants were simultaneously proposed, one for Sinclair Rubber, Inc. (a subsidiary of Sinclair Refining Company) in the Houston area, one in the Port Arthur-Beaumont area for Neches Butane Products Company (a corporation organized for this purpose and jointly owned by the Atlantic Refining Company, Gulf Oil Corporation, The Pure Oil Company, Socony-Vacuum Oil Company, and the Texas Company), and one in the Chicago area for Rubber Synthetics, Inc. (a corporation organized for this purpose and jointly owned by Standard Oil Company (Indiana), Sinclair Refining Company, and Cities Service Oil Company). Arrangements were made for technical committees appointed by the interested companies to receive and review technical information of other companies which had a greater experience in the field of petroleum butadiene manufacture. (The exchange of such technical information was effected under the terms of an interchange agreement, which will be discussed elsewhere in this report.) After several months of intensive study and preparation of design data the technical committees decided to employ a combination process which reflected what were considered to be the best features of each of the processes which were the subject of the study. The two technical committees representing a total of eight petroleum companies decided upon the same combination process. Construction of the plant in the Chicago area was authorized in March 1942 and the plants at Port Neches and Houston in March and April 1942.

A series of meetings was held in the early part of June 1942 attended by the technical representatives of the proposed operators of these three large plants for the purpose of ascertaining whether sufficient raw material could be made available for such plants. After full discussion it was determined that sufficient butylenes could be furnished for such purposes by the installation of catalytic cracking facilities. The importance of this change was that it made possible the furnishing of butylenes for these plants, the furnishing of base materials for aviation gasoline, and the elimination of equipment in the three plants for the production of butylenes from butane. The over-all result of the change was to increase the operating flexibility of both the butadiene and aviation gasoline plants and to make more economic use of equipment and construction materials.

Other petroleum butadiene plants were being considered simultaneously with the authorization of the plant in the Chicago area. In August 1942 it became apparent that the butadiene plant capacity under authorization was more than sufficient for the needs of the projected 705,000-ton GR-S program, and that these other plants could be made to produce the necessary quantities of butadiene from petroleum with the use of a smaller amount of critical materials and equipment than was required for the plant proposed to be located in the Chicago area. As a consequence the latter project was canceled. The other two plants at Houston and Port Neches remained in the program.

The Office of the Petroleum Coordinator for War advised Rubber Reserve Company early in 1942 that an over-supply of naphtha and stove oil existed in the Southern California district. Certain existing facilities owned by Southern California Gas Company, which were normally used only as stand-by gas facilities, were found to be available and suitable to the manufacture of a butadiene fraction from naphtha or

stove oil, and consequently in April 1942 Rubber Reserve Company authorized Southern California Gas Company to undertake the conversion of such gas generators to the manufacture of fractions containing substantial quantities of butadiene and materials usable in the aviation gasoline program. Later arrangements were made with Shell Chemical to receive the butadiene fraction for separation and purification and with Shell Oil to receive the aviation gasoline fraction. This conversion program also contemplated the production of substantial quantities of fuel gas.

As early as May 1942 discussions took place between Rubber Reserve Company and OPC regarding the production of butadiene through conversion of existing refinery facilities. Rubber Reserve Company was in favor of such a refinery conversion program to the extent that it might provide butadiene quickly for use in the synthetic rubber program during the latter months of 1942 and the early months of 1943, when the butadiene shortage in the program was likely to be most acute. Prior to the receipt of any specific recommendations from OPC Rubber Reserve Company, in June of 1942, authorized Atlas Oil and Refining Company to convert its existing refinery at Shreveport, Louisiana, to the production of butadiene with a projected capacity of approximately 8,300 tons per year, and in August of 1942 Rubber Reserve Company likewise authorized Standard Oil Company of Louisiana to convert existing refinery facilities at Baton Rouge, Louisiana, to the manufacture of butadiene with a projected capacity of approximately 6,860 tons per year.

In August 1942 OPC advised Rubber Reserve Company of its approval of the latter two refinery conversion projects, together with an additional project which was subsequently authorized by Rubber Reserve Company during the same month for Sun Oil Company involving the conversion of facilities at Toledo, Ohio, to the manufacture of butadiene with a projected capacity of 15,000 tons per year. OPC at the same time presented a list of other possible refinery conversion projects which were given consideration by Rubber Reserve Company but for which no authorizations were issued because of the character of the processes to be employed, the unsuitable location of the projects from a transportation standpoint, the required time for completion, or because of the amount of new construction materials involved.

The refinery conversion project authorized for Sun Oil Company involved the utilization of the Houdry process for the manufacture of butadiene. This process was the subject of considerable discussion during the period from May 1942 to the date of authorization of the Sun project. It was the judgment of Rubber Reserve Company that although the process appeared interesting, it had not been tested to the degree necessary to warrant substantial inclusion in the program. Hence, Rubber Reserve Company looked upon the authorization for Sun Oil Company's refinery conversion project largely as a basis for testing the Houdry process on a commercial scale.

### C. Styrene

In order to meet the requirements of the expanded program for the manufacture of GR-S type synthetic rubber it was also necessary for Rubber Reserve Company to make arrangements for the manufacture of styrene, which is the other principal ingredient material. These arrangements were initiated in 1941, and the styrene program was successively expanded to keep pace with the increased butadiene program. At the date of the inception of the styrene program the only commercial producer of synthetic styrene was The Dow Chemical Company which had manufactured this product on a relatively small scale for several years. In February of 1942 Rubber Reserve Company entered into a contract with Dow for the purchase of styrene produced in an addition to its privately-owned plant to be constructed and located at Midland, Michigan, the entire plant with its additions having a productive capacity of approximately 12,000 tons per year. In March of 1942 Rubber Reserve

## SECTION VI—FINANCIAL

### A. *Plant Ownership*

All of the government-owned plants in the synthetic rubber program were constructed under the auspices of Defense Plant Corporation (another subsidiary of RFC) at the request of Rubber Reserve Company, subject to a written indemnity agreement executed by Rubber Reserve Company. The plants are leased by Defense Plant Corporation to the various operating companies at a nominal rental of one dollar per year. As a matter of general governmental policy established at the beginning of the program the lease agreements contain no purchase option in favor of the lessee-operator. As a result of this fixed policy the government is in a position to determine the final disposition of the government-owned plants in the synthetic rubber program, which represent over 95% of the total synthetic rubber production capacity of the country. Such final disposition will be determined by the government in the light of the amount of synthetic rubber production required, the quality of synthetic rubber as compared with natural rubber, the cost of production of synthetic rubber as compared with landed cost of natural rubber, and other post-war conditions.

### B. *Operating Agreements and Fees*

All of the contracts covering operations conducted in government-owned facilities are on a "cost-plus-a-management-charge" basis with the exception of the agreements covering the operation of two butadiene plants having a combined rated capacity of 150,000 tons per year operated by Neches Butane Products Company and Sinclair Rubber, Inc., which latter contracts are on an actual cost basis with no management charge included. Since the operations were of unprecedented size and character the management charge in each case was determined on the basis of projected operations without any actual operating experience to serve as a guide. The management charge in each case is in lieu of reimbursement for expenses for executive management and general overhead not susceptible of being allocated to the direct costs of operation. In the case of the butadiene and styrene agreements, a part of the charge is segregated to serve as a royalty allowance for patent rights and technical information used in the operations conducted under the agreement, this being integrated with the provisions of the related technical information interchange agreements previously mentioned so that such allowance is either retained by the operating company or paid in whole or in part to some other party to the interchange agreement, depending upon whose patent rights and technical information are employed in such operations. Each of the management charges is graduated downward based upon incremental production so that all companies operating the same type of plants receive the same fee for equal tonnage. The original charge payable for operation of the copolymer plants was subsequently reduced out of recognition for the large increase in the size of the GR-S program over that which was contemplated at the time the original management charge schedule was established.

Materials produced in privately-owned plants are for the most part purchased on a negotiated-price basis.

### C. *Distribution Prices*

As mentioned previously, Rubber Reserve Company became the sole distributor of crude rubber for the entire country in June 1941. The base price established for crude rubber distribution was  $22\frac{1}{2}\text{¢}$  per pound. In 1942 Rubber Reserve Company

likewise became the sole distributor of all synthetic rubber produced in government-owned facilities. For the purpose of such distribution, Rubber Reserve Company adopted symbols to denote the various types of synthetic rubber produced and sold by Rubber Reserve Company, such symbols being as follows:

- GR-S.....Synthetic rubber of the butadiene-styrene-copolymer type (the symbol standing for "Government rubber—styrene");
- GR-M.....Neoprene type (the symbol standing for "Government rubber—Monovinylacetylene");
- GR-I.....Butyl rubber type (the symbol standing for "Government rubber—  
isobutylene");
- GR-A.....Synthetic rubber of the butadiene-acrylonitrile-copolymer type (the symbol standing for "Government rubber—acrylonitrile").

Other symbols have been designated for synthetic rubber representing variations of the foregoing standard types, some of such synthetic rubbers being of an experimental character.

The following prices were established at the beginning of the program and prevailed during the period from 1942 to April 1, 1943:

- GR-S.....50¢ per pound
- GR-M.....65¢ per pound
- GR-I.....33¢ per pound

When synthetic rubber production reached large proportions in March 1943, consultations were had with representatives of OPA for the purpose of establishing new prices which would be satisfactory to OPA from the standpoint of war-time price control measures. It was the view of OPA that the domestic rubber economy was geared to the established price of  $22\frac{1}{2}$ ¢ per pound for crude rubber and that the prices to be established for synthetic rubbers should bear a direct relationship to this price. In applying such standard to the prices for synthetic rubbers, OPA gave due recognition to the different characteristics of such rubbers, and the following prices were established to reflect the formulae adopted by OPA:

- GR-S..... $18\frac{1}{2}$ ¢ per pound
- GR-I..... $15\frac{1}{2}$ ¢ per pound

The representatives of OPA agreed that it was not necessary to apply such price controls to synthetic rubbers going into the fabrications of products purchased by the various procurement agencies of the Federal Government, which agencies consist of the War Department, Navy Department, the Procurement Division of the Treasury Department (which makes purchases for Lend-Lease), and U. S. Maritime Commission. After consultation with these procurement agencies, Rubber Reserve Company established an arrangement pursuant to which it would receive from each such agency monthly payments at the rate of  $17\frac{1}{2}$ ¢ per pound of natural or synthetic rubber used in products purchased by such agencies based upon monthly consumption reports submitted to Rubber Reserve Company by the rubber manufacturing companies.

Consistent with this arrangement, effective as of July 1, 1943, OPA established a price of  $27\frac{1}{2}$ ¢ per pound for GR-M used in civilian orders and the government procurement agencies were thereupon required to pay to Rubber Reserve Company the same differential of  $17\frac{1}{2}$ ¢ per pound for GR-M used in products purchased by such agencies.

As a result of this arrangement, a "two-price" system came into being with the lower price in each case being applicable to natural or synthetic rubbers used in

products purchased by civilians and the higher price in each case being applicable to natural or synthetic rubbers used in products purchased by the government procurement agencies. Under the terms of the agreements entered into between Rubber Reserve Company and the government procurement agencies, the higher prices applicable to "war order" use of synthetic rubbers were intended to be compensatory of Rubber Reserve Company's actual costs of production. The prices applicable to "civilian order" use of synthetic rubbers have not been fully compensatory of Rubber Reserve Company's costs of production and substantial losses have been incurred by Rubber Reserve Company with respect to the quantities of synthetic rubber so used. This has been necessary because of OPA's price controls which are designed to prevent increase in the civilian cost of living.

GR-A is sold on a single-price basis which is the established market price for Buna-N type rubbers.

#### *D. Costs*

##### *1. General*

The costs of production being realized in the Government synthetic rubber plants reflect the varying costs of butadiene and other ingredient materials which are attributable to wartime conditions, particularly the wartime cost of grain alcohol which is used in substantial quantities to produce butadiene in the Government program. It is believed that the potentialities of the synthetic rubber industry are indicated by the operating results obtained to date, although the selection of processes and feedstocks were affected by the necessity for speed of completion, the shortage of critical materials, and the wartime availability of feedstocks, as well as technical and economic considerations.

The following analysis is based on plant costs, exclusive of Washington administrative expense, interest, research expense, plant amortization, and sales expense. Since the plants are operated for the Government by private companies, a charge has been included in most cases to cover home office management expense. Allowance has been made for the payment of royalties at rates which are lower during the war period than they will be post-war.

##### *2. GR-M (Neoprene)*

The principal element in the cost of producing GR-M is the price paid for acetylene. Using present acetylene prices of 11.5¢ to 12.0¢/lb., GR-M is being produced at a cost of 23¢ to 24¢/lb. Based on a probable post-war acetylene price of 6¢ to 7¢/lb., it is reasonable to expect that GR-M may be produced for cost in the neighborhood of 19¢/lb.

##### *3. GR-I (Butyl)*

Major operating difficulties have been experienced by the producers of GR-I rubber, and it was not until the latter part of 1944 that the plants operated at sufficiently high rates to indicate the order of magnitude of operating costs which may be expected, once rated capacity is attained. The cost of manufacturing GR-I rubber was approximately 13¢ to 18¢/lb. during the last quarter of 1944, when operating rates of fifty to eighty percent of rated capacity were being realized. Higher production rates and lower production costs are expected during the coming year.

##### *4. GR-S (Butadiene-Styrene Type)*

There are three factors which must be considered in arriving at the cost of producing GR-S, namely the cost of butadiene, the cost of styrene, and the cost of

# EXHIBIT 9

## **Report of the Rubber survey committee : September 10,1942.**

United States.

[Washington : s.n., 1942]

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*Report of the*  
**RUBBER SURVEY  
COMMITTEE**

*U. S. Special committee to study  
the rubber situation*

**SEPTEMBER 10, 1942**

*James B. Conant*

*Karl T. Compton*

*Bernard M. Baruch, chairman*

D

*To the Congress of the United States:*

I herewith send to you, for your information, the digest and report of the Special Inquiry Committee which I appointed on August 6 to study our rubber situation and to recommend action.

The Committee consists of B. M. Baruch, Chairman, Dr. J. B. Conant, President of Harvard University, Dr. Karl T. Compton, President of Massachusetts Institute of Technology, and a staff of experts.

The introduction to the report tells the story in outline; the report proper gives the details in full.

FRANKLIN D. ROOSEVELT

The White House, *September 10, 1942*

☆ ☆ ☆

*For the Press*

I have received the report of Messrs. Baruch, Conant and Compton and have forwarded copies to the Congress for its information.

Recommendations made by the special committee will be put into effect as rapidly as arrangements can be made.

It is an excellent report. The Government owes a debt of gratitude to the committee members for the time, labor and efficient handling of this most important work.

*Statement by the President*

*September 10, 1942*

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Without synthetic rubber, our stocks of new rubber would be exhausted during 1943. If synthetic rubber production now planned comes through on schedule, we can get through, but without adequate reserves against contingencies. The allotment of a small amount of reclaim, crude, and synthetic material will provide a tire replacement and recapping program, but only with drastic restrictions on civilian driving.

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The armed forces have already severely reduced their rubber requirements and instituted conservation measures. They state that further substantial reduction would seriously impair fighting efficiency.

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To maintain civilian driving to a degree necessary for public morale, avoidance of unnecessary hardship, and efficient functioning of our economy, the Committee recommends a program of civilian automobile tire conservation based on supervised recapping and replacement of tires to maintain cars in operating condition, safeguarded and combined with universal enforcement of a 35-mile-per-hour speed limit, tire inspections, and reduction in mileage to a national average of not over 5,000 miles per car. It further recommends nationwide gasoline rationing as the quickest and most workable method for conserving rubber through control of mileage. It also recommends an expansion of the Thiokol program for recapping by 36,000 tons.

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To safeguard the military situation in the critical year 1943 against possible delay in synthetic rubber production, or failure to obtain expected crude rubber imports, or further expansion of requirements dictated by enemy actions or new strategy; also to provide the additional rubber needed to maintain the civilian automobile use outlined: the Committee recommends (1) that there be no further substitutions in the plans now laid down; (2) the immediate authorization of an additional 140,000 long tons of Buna S capacity per year; (3) immediate institution of a refinery

conversion program to yield 100,000 short tons of butadiene in addition to that now planned; (4) the immediate adjustment in the rates of construction of present styrene and polymerization plants in order to obtain the maximum production of Buna S in 1943; (5) the construction of an additional plant for the production of 20,000 tons of Neoprene per year; (6) the erection of a 27,000-ton butadiene plant from grain and an associated polymerization plant to produce 30,000 tons of Buna S, both to be located near the center of grain production, the construction to be started six months hence unless the Rubber Administrator determines otherwise; the process to be employed to be determined in the light of the information then available; (7) the immediate erection of alcohol plants to produce 100 million gallons per year, using recently developed apparatus, the plants to be erected on sites near the grain producing states and located on water transportation.

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If the synthetic rubber program is to succeed <i>on time</i> , assured arrangements for construction materials are urgent.	
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The Committee finds that consistency, cooperation between governmental agencies, and adequate management have been lacking. It therefore recommends appointment, by the Chairman of WPB, of a Rubber Administrator, to whom he shall delegate full responsibility and authority for all aspects of the rubber program (except for specific limitations where aviation gasoline and toluene for explosives are concerned).	
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Action within a month is necessary to remove legal restrictions on acreage and to provide certain farm equipment in order to avoid a whole year's delay in expanding the planting of guayule, which can become a major source of new crude rubber within a few years.	
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The Committee recommends immediate steps to increase by 20 percent the country's capacity to reclaim rubber from rubber scrap. It also recommends a nationwide survey of rubber milling, mixing and tire building capacity, to be carried out on or about March 1, 1943, in the light of the mixing, milling, compounding, tire building, and vulcanizing arts which then exist for the processing of synthetic rubbers, and that steps then be taken to provide whatever additional manufacturing facilities are found to be necessary to handle the full volume of synthetic rubber production expected in 1944.	
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The Committee finds the present scrap stock piles plus current receipts sufficient to feed the reclaim rubber plants at full capacity for the next 18 months. In the meantime, normal scrap collection should be continued and plans laid for a second intensive drive for scrap, probably about a year hence. It is important that measures be taken for further protection of existing scrap rubber stockpiles.	
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# PART I

## *Letter of Transmittal and Introduction to Report*

Mr. President:

Herewith is presented a digest and full report of the Committee you appointed on August 6, with instructions that the survey "include not only facts with respect to existing supplies and estimates as to future needs, but also the question of the best method to be followed for obtaining an adequate supply of rubber for our military and essential civilian requirements. \* \* \* to recommend such action as will best produce the synthetic rubber necessary for our total war effort, including essential civilian use, with the minimum interference with the production of other weapons of war."

We find the existing situation to be so dangerous that unless corrective measures are taken immediately this country will face both a military and a civilian collapse. The naked facts present a warning that dare not be ignored. We present herewith the significant figures:

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*Crude rubber position of the United States (July 1, 1942 to January 1, 1944)  
in long tons:*

On hand July 1, 1942 (Stockpile).....	578,000 Tons
Estimated imports July 1, 1942 to January 1, 1944.....	53,000 Tons
<i>Total crude rubber</i> .....	631,000 Tons
Estimated military and other essential demands July 1, 1942 to January 1, 1944 with no allowance for tires for passenger automobiles.....	842,000 Tons
<i>Deficit that must be met by production of synthetic rubber before January 1, 1944</i> .....	211,000 Tons

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Unless adequate new supplies (natural or artificial) can be obtained in time, the total military and export requirements alone will exhaust our crude stocks before the end of next summer.

Tires on civilian cars are wearing down at a rate eight times greater than they are being replaced. If this rate continues, by far the larger number of cars will be off the road next year and in 1944 there will be an all but complete collapse of the 27,000,000 passenger cars in America.

We are faced with certainties as to demands; with grave insecurity as to supply. Therefore this Committee conceives its first duty to be the maintenance of a rubber reserve that will keep our armed forces fighting and

our essential civilian wheels turning. This can best be done by "bulling through" the present gigantic synthetic program and by safeguarding jealously every ounce of rubber in the country.

At the same time we find that rubber for necessitous civilian use has been insufficiently allocated. More must be allowed for tire replacement and recapping. That is part of the conservation program we submit. More rubber use to those who need it; less to those who don't!

Let there be no doubt that only actual needs, not fancied wants, can, or should, be satisfied. To dissipate our stocks of rubber is to destroy one of our chief weapons of war. We have the choice!

Discomfort or defeat. There is no middle course.

**Therefore, we recommend:**

**That no speed above 35 miles an hour be permitted for passenger cars and trucks. (In this way the life of tires will be prolonged by nearly 40 percent.)**

**That the annual average mileage per car now estimated as 6,700 miles be held down to 5,000, a reduction of 25 percent. (This does not mean that each has a right to 5,000 miles a year; it applies to necessary driving.)**

**That more rubber than now is given to the public be released to fully maintain, by recapping or new tires, necessary civilian driving.**

**That a new rationing system of gasoline be devised, based on this 5,000 miles a year to save tires.**

**That the restrictions as to gasoline and mileage be national in their application.**

**That compulsory periodic tire inspection be instituted.**

**That a voluntary tire conservation program be put into effect until gasoline rationing can be established.**

Gas rationing is the only way of saving rubber. Every way of avoiding this method was explored, but it was found to be inescapable. This must be kept in mind: The limitation on the use of gasoline is not due to shortage of that commodity—it is wholly a measure of rubber saving. That is why the restriction is to be nationwide. Any localized measure would be unfair and futile.

This note of optimism is permissible: If the synthetic program herein outlined will fulfill reasonable expectancy, it will be possible to lessen this curtailment before the end of 1943. But until then, any relaxation is a service to the enemy.

In answering the questions of how much rubber do we have and where are we going to get more, the country is dependent, finally, upon the pro-

duction of synthetic rubber, which, it is hoped, will reach its full swing in 1944.

Why not earlier? Why so late? The answers to these queries lie in the past. These errors, growing out of procrastinations, indecisions, conflict of authority, clashes of personalities, lack of understanding, delays, and early non-use of known alcohol processes, are not to be recounted by us, nor shall we go into the failure to build a greater stockpile of crude rubber. We are concerned with the past record only insofar as it has seemed to us to cast light on problems of future administration.

To prevent a recurrence of these mistakes, this Committee asks an immediate reorganization in present method and the creation of a Rubber Administrator. This official will have authority over the policies governing the priceless stock of rubber now on our automobiles, the drivers of which are trustees of our national safety. He will direct the course of the technical and industrial development—wholly new to America—of the synthetic rubber production.

If our hopes are realized, the production of Buna S and Neoprene (the two synthetic materials on which we now rely most to replace crude rubber) will total 425,000 tons by the end of 1943. But, on the other hand, the figure might easily fall to less than half that amount if delays occur—delays of as little as 120 days. “Bugs” may be found in plant construction or in operations at any one of the three stages in the manufacture of Buna S—the making of butadiene, the making of styrene, and the polymerization, or mixing, of the two.

With 425,000 tons we should have a margin of safety, a slight one, to be sure, perhaps 100,000 tons above necessary inventories for ourselves and our allies—for the Front. With only 200,000 tons of Buna S produced, our supplies would be exhausted. The successful operation of our mechanized army would be jeopardized.

We cannot afford to take a chance. It is better to be safe than to be sorry. We dare not depend upon unbuilt plants; upon increasing the reclamation of scrap; upon bringing the tire manufacturing capacity up to equal a theoretical synthetic production; upon other unproven factors.

The members of this Committee have full faith in the ability of American industry to lick all these problems, but there is grave uncertainty as to time. Whatever our hopes, or even our reasonable estimates, until the synthetic rubber plants are operating at capacity, we cannot take unnecessary risks. We cannot base military offensives on rubber we do not have. All our lives and freedoms are at stake in this war.

Until synthetics come fully to hand, we recommend that sufficient reclaimed rubber, a small amount of crude, and an increased supply of Thiokol, or other substitutes, be made available for the tire replacement and recapping program which we urge shall go into effect at once.

Perhaps this should be said: Few believed that 90 percent of our normal supply of crude rubber would be cut off when Pearl Harbor was attacked December 7. And only a few evaluated the situation correctly after that date!

There are almost as many estimates of future supplies—the rubber we do not have—as there are persons and agencies concerned in this problem. It is important to bear in mind that these are only estimates—based upon great intangibles.

How much rubber we shall get from South America, for example, depends on the shifting of nearly half a million natives into the Amazon valley—it would be one of the great population movements of history—and on how many of them succumb to sickness and disease. It depends, too, on how successful we are in combating the menace of Hitler's underseas raiders.

No one can estimate with certainty the amount of scrap rubber in the United States. About 400,000 tons of scrap rubber were collected in the drive inaugurated by the President last June. This gathered scrap will yield about 300,000 tons of reclaimed rubber. It is true that nowhere near all of the scrap in the country has been collected. However, there already is on hand more than enough scrap to keep the entire reclaiming industry operating at capacity for many months. The Committee is recommending measures to step up reclaiming operations to the fullest capacity and also a 20 percent expansion of existing reclaiming facilities. Until that is done, the accumulation of huge scrap piles is an unnecessary fire and sabotage hazard which gives the Committee much concern.

Roughly, a year will be required to increase reclaiming capacity appreciably. Too, reclaimed rubber is inferior to natural rubber, and its use as a substitute for crude is limited. So, again, we find that in the final analysis we are basically dependent upon synthetic rubber.

Failure of the responsible officials to request the aid of Russia in setting up our synthetic system is a neglect for which we have not had a satisfactory explanation. The Soviet Republics have been first or second in the production of synthetic rubber, and we are asking that their "know how" be obtained. The Soviet has expressed a willingness always to be cooperative. Russia has lost, through the German advance, between 50,000 and 60,000 tons of its annual rubber-making capacity.

Among other points to which the Committee directs attention are:

**Faulty flow of critical materials may block or delay plant construction.**

**No new synthetic processes are to be substituted for those approved.**

**That the present program must be expanded to roughly 1,100,000 tons of all synthetics.**

**That the road rubber (rubber actually in tires now used on passenger cars and trucks) totals 1,000,000 tons.**

**In rubber, the United States must be listed as a "have not" Nation.**

Once we are secure in our position, we shall be freed from a source of worry that affects the high military and other governmental figures. We shall gain that position through sacrifices. There is no royal road to victory.

Herewith follows the digest of our findings and recommendations and, as a separate document, the full report.

Respectfully submitted,

JAMES B. CONANT

KARL T. COMPTON

BERNARD M. BARUCH, *Chairman*

*September 10, 1942*

# PART III

## *Full Report of the Committee*

### 1. *Statement of the Problem*

Of all critical and strategic materials, rubber is the one which presents the greatest threat to the safety of our nation and the success of the Allied cause. Production of steel, copper, aluminum, alloys, or aviation gasoline may be inadequate to prosecute the war as rapidly and effectively as we could wish, but at the worst we still are assured of sufficient supplies of these items to operate our armed forces on a very powerful scale. But if we fail to secure quickly a large new rubber supply our war effort and our domestic economy both will collapse. Thus the rubber situation gives rise to our most critical problem.

Our position with respect to this vital commodity may be briefly outlined as follows:

The demands now placed upon us are enormous. Without any allowance whatsoever for civilian passenger car tires, the estimated requirements for the year 1943 are 574,000 tons. This contrasts with the total average over-all consumption in the United States before the war of about 600,000 tons.

We must supply not only the needs of our own armed forces but much of those of the military machines of our Allies as well. We must equip our buses and trucks and other commercial vehicles and provide on a large scale specialty items for such purposes as factory belting, surgical, hospital and health supplies. And in addition to all these we *must* maintain the tires on *at least* a substantial portion of our 27,000,000 civilian passenger automobiles. Otherwise an economy geared to rubber-borne motor transport to an extent not approached elsewhere in the world will break down.

To meet these demands we may look to four main sources of supply:

*First*, our present stockpile of natural rubber and such additions as may come to it from natural rubber imports from Latin America, Africa, and other rubber-producing lands. These are comparatively small.

*Second*, our present stockpile of scrap rubber, estimated as sufficiently large with yearly additions to operate our reclaiming industry at present capacity through the year 1945.

*Third*, the production of synthetic rubbers.

*Fourth*, we possess in the tires of our automobiles a priceless reserve, which must be guarded with greatest care. It represents a stockpile of some 1,000,000 tons of rubber applicable to the uses of our civilian transportation and the needs of the day-to-day life of our people.

Having lost to Japan 90 percent of our pre-war source of natural rubber, chief reliance on new supplies of rubber must be placed on the new synthetic rubber program. But to obtain this in time we must have created, within two years after Pearl Harbor, one of the largest industries in the country. Normally such a development would require a dozen years. To compress it into less than two years is an almost superhuman task.

Our Committee is convinced that the Government's present program is technically sound. From this time on the important thing is to get on with it without further delay.

In drawing up the recommendations which follow, the Committee has sought to find a basis upon which the entire nation can go forward together, uniting our energies against the enemy instead of dissipating them in domestic wrangling. It appreciates that it is asking the public to make sacrifices because of mistakes that have been made and for which the people are not to blame. But wrong things done in the past cannot be cited as a defense for making mistakes in the future. The war demands that we go forward from this point united and resolved to win at any cost. Victory can be won in no other way.

## *2. Procedure of the Committee*

The Committee was asked "to get the facts and make recommendations." To this end, immediately after its appointment it assembled a competent technical staff of approximately twenty-five men of whose competence we had knowledge through first-hand experience. With the aid of this group the Committee has endeavored as far as humanly possible in the time at our disposal to get the facts and draw from these facts the logical conclusions.

With the aid of experts in the art of rubber manufacture and rubber compounding and with the assistance of a group of chemists and chemical engineers, we checked so far as possible the chemical processes involved in the Government program and those suggested by individuals and companies not yet included in this program. For this purpose members of our staff traveled throughout the eastern, southern, and middle-western sections of the country, examining plants, consulting the technical experts concerned with the progress of the program and in the construction of new facilities. With their aid, we also examined carefully the present status of all tests throwing light on the adequacy of the new synthetic materials for military and civilian purposes, as well as the potentialities of numerous materials which have been suggested for the recapping of tires or special uses in the rubber program. We also examined at first hand into the condition and state of protection of the nation's stockpile, which must serve as the essential backlog of our efforts until synthetic materials can be brought into substantial production.

Special checks likewise were made by men competent in business and engineering associated with the Committee, as to the rate of construction of scheduled plants and the situation with respect to the allocation of strategic materials to these plants and the granting of the necessary priorities. The capacity of the country to produce the essential raw materials for the development of the synthetic program also was checked. We have endeavored with the aid of competent assistance to evaluate the potential requirements of this country and the United Nations and have made our estimates of the probable supply, present and to come.

In addition to interviewing, through our staff, a number of persons familiar with the various aspects of the rubber situation, we heard formally many officials of the Government as well as representatives of industry. A great number of documents from governmental and other sources were put at our disposal, and we examined these records with care. The printed records of hearings before the committees of Congress which deal with this subject run to thousands of pages. We reviewed the evidence thus presented as of value on many points. All of the Congressional Committees who had interested themselves in the problem were asked for their

suggestions or recommendations and many stimulating suggestions were made. Particularly helpful were the Committees under the chairmanships of Senators Truman, Gillette, and Murray. In conclusion, it is a pleasure to acknowledge that from all with whom we have been in touch we have received the maximum of cooperation.

# **EXHIBIT 10**

**Report with respect to the development of a program for disposal  
of the Government-owned rubber-producing facilities.**

Reconstruction Finance Corporation.  
Washington : Govt. Print. Off., 1949.

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**REPORT WITH RESPECT TO THE DEVELOPMENT OF A**

**Program  
for Disposal of the  
Government-Owned  
Rubber-Producing  
Facilities**

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**RECONSTRUCTION FINANCE CORPORATION**

**APRIL 1, 1949**

**REPORT WITH RESPECT TO THE DEVELOPMENT OF A  
PROGRAM FOR DISPOSAL  
OF THE GOVERNMENT-OWNED  
RUBBER-PRODUCING  
FACILITIES**

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**Reconstruction Finance Corporation**

**WASHINGTON, D. C.**

**April 1, 1949**

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## RECONSTRUCTION FINANCE CORPORATION

WASHINGTON 25, D. C.

The PRESIDENT.

The HONORABLE, THE PRESIDENT OF THE SENATE.

The HONORABLE, THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIRS: In accordance with the provisions of Section 9 (a) of the Rubber Act of 1948 (Public Law 469, 80th Cong.) and Executive Order 9942, April 1, 1948, there is submitted herewith a report with respect to the development of a program for the disposal to private industry of the Government-owned rubber-producing facilities. The principles and recommendations contained in this report were formulated by a Government Inter-Agency Disposal Committee, under the chairmanship of a representative of this Corporation, established for this specific purpose, after due consideration of suggested disposal procedures submitted by the rubber, petroleum, and chemical industries.

The Inter-Agency Disposal Committee was comprised of staff nominees of the respective Secretaries of seven Departments of the Executive Branch and observers from the National Security Resources Board. The views of industry have been obtained through reports submitted by a Rubber Industry Advisory Committee and a Petroleum-Chemical Industry Advisory Committee comprised of members from representative companies of these respective industries. Many of the companies represented on the industry committees have had an active part in the development and operation of the Government Synthetic Rubber Program.

The disposal program outlined in the report is designed to function within the broad framework of security requirements as now envisaged. While detailed disposal policy questions concerned with national security do not fall within the scope of the report, it appears essential that these questions be fully examined by the appropriate Government agencies before the submission of disposal legislation to the Congress in January 1950.

The report is based upon the coordinated views of all members of the Inter-Agency Disposal Committee. The report has been reviewed by eleven interested agencies of the Executive Branch and has been revised in the light of the comments received.

Respectfully,


HARLEY HISE, *Chairman.*

## SECTION I

# SUMMARY

This report details the development of a program intended to terminate Government ownership of synthetic rubber-producing facilities in a manner best suited to the interests of national security and in a manner equitable to both Government and industry.

The development of such a disposal program is in accordance with the requirements of the Rubber Act of 1948. The Act defines "rubber-producing facilities" as those "in whole or in part, for the manufacture of synthetic rubber, and the component materials thereof, including, but not limited to, buildings and land in which or on which such facilities may be located and all machinery and utilities associated therewith."

The report is in five sections, inclusive of this summary, section I.

Section II outlines the procedure followed by the Reconstruction Finance Corporation in developing a disposal program. The views of allied industries were sought and obtained through reports which are appended. The program was developed with the assistance of an Inter-Agency Disposal Committee established for that purpose and this report reflects the combined efforts of interested agencies of the Executive Branch as requested by the President.

Section III sets forth the principles essential to both the development and execution of the disposal program. These principles are intended to establish a pattern of disposal which will provide for uniformity and the equitable operation of the program from the viewpoints of both Government and private industry.

Section IV presents the disposal program recommended. It provides for the sale of the facilities at prices directly related to their actual functional use, safeguarding the Government against windfalls flowing to the purchasers, and, at the same time, offering private industry a method of purchase that will not involve the assumption of extraordinary risks.

Section V refers to legislation required for the implementation of the proposed program.

The report cites the potential value of the industry to an expanding, prosperous peacetime economy.

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## SECTION II

# DEVELOPMENT OF PLAN

The Rubber Act of 1948 provides in section 9 (a) that the agency "designated by the President pursuant to section 7 (a) of this Act shall undertake immediate study, conducting such hearings as may be necessary, in order to determine and formulate a program for disposal to private industry by sale or lease of the Government-owned rubber-producing facilities \* \* \*." It is also provided in section 9 (a) that "A report with respect to the development of such a disposal program shall be made to the President and to Congress not later than April 1, 1949."

Executive Order 9942, dated April 1, 1948, provides that "The Reconstruction Finance Corporation shall perform and exercise the functions vested in the President by, or designated in, section \* \* \* 7 \* \* \* of the Rubber Act of 1948 \* \* \*" and thus vests in the Corporation the responsibility for the formulation of a disposal program as required in section 9 (a) of this Act.

The President in a letter, dated June 25, 1948, to the Chairman of the Board of the Reconstruction Finance Corporation requested that the report with respect to the development of a program for the disposal of the Government-owned rubber-producing facilities reflect the combined efforts of all the interested agencies of the Executive Branch.

In order to comply with this request an Inter-Agency Disposal Committee was established, comprised of staff nominees of the respective secretaries of seven departments of the Executive Branch and observers from the National Security Resources Board.<sup>1</sup>

The Inter-Agency Disposal Committee immediately undertook the task of obtaining and correlating the views of the members of the respective agencies into a disposal program within the framework of premises established by the declaration of policy in the Rubber Act of 1948.

In section 9 (a) of the Act the designated agency is authorized to conduct such hearings as may be necessary to implement the development of a disposal program. In making the study required by the

<sup>1</sup> See Appendix A—Membership of Committees.

law the Chairman of the Inter-Agency Disposal Committee found that the views of industry could best be obtained by the establishment of industry advisory committees. After conferences with representatives of the rubber, petroleum and chemical industries, two such committees were established, a Rubber Industry Advisory Committee, and a Petroleum-Chemical Industry Advisory Committee, the membership of which comprised a broad and diverse representation of the respective industries.<sup>2</sup> It was understood that the industry advisory committees would function independently and would prepare and present reports embodying specific recommendations with respect to disposal. The committees, after holding a number of meetings over a period of several months, submitted their respective reports<sup>3 4</sup> on January 26 and February 2, 1949.

The recommendations of the industry advisory committees have been carefully considered by the Inter-Agency Disposal Committee and to the extent possible are reflected in the proposed disposal program.

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<sup>2</sup> See Appendix A—Membership of Committees.

<sup>3</sup> See Appendix B—Report of the Rubber Advisory Committee.

<sup>4</sup> See Appendix C—Report of the Petroleum-Chemical Advisory Committee.

### SECTION III

## PRINCIPLES

In developing a disposal program—in order to assure the program's smooth, satisfactory, and continuous operation, to keep it strictly within the meaning of the law, and to provide a background for future legislation required for its implementation—it became necessary to establish certain basic principles.

The program itself necessarily derives from the Act and has been developed in accordance with the declaration of policy set forth therein. The Act states that it shall be “the policy of the United States”:

“\* \* \* that there shall be maintained at all times in the interest of national security and common defense \* \* \* a technologically advanced and rapidly expandible rubber-producing industry in the United States of sufficient productive capacity to assure the availability in times of national emergency of adequate supplies of synthetic rubber to meet the essential civilian, military, and naval needs of the country.

“\* \* \* the security interest of the United States can and will best be served by the development within the United States of a free, competitive synthetic rubber industry.

“\* \* \* to strengthen national security through a sound industry it is essential that Government ownership of production facilities, Government production of synthetic rubber, regulations requiring mandatory use of synthetic rubber, and patent pooling be ended and terminated whenever consistent with national security as provided in this Act.”

In addition to this statement of policy, the Act specifically contemplates the “sale or lease” of the Government-owned rubber-producing facilities to private industry. It also specifies the tonnage of “rated production capacity”<sup>1</sup> of facilities to be sold or maintained in standby condition, as well as the minimum tonnage of synthetic rubber to be produced annually, either by Government or private industry. Finally, it should be reiterated that the timing of any disposal program is made dependent upon the constant requirements of national security. The objectives of the Act relating to disposal are stated clearly in these specific requirements and in the policy declaration.

<sup>1</sup> “Rated production capacity” should be distinguished from “rated capacity” shown on the plant listing in Appendix D. “Rated capacity” represents design capacity and is that currently carried on the records of the Office of Rubber Reserve, while “rated production capacity,” is to be assigned at some future date.

## APPENDIX D

# GOVERNMENT SYNTHETIC RUBBER PROGRAM—SUMMARY OF PLANTS BY STATUS

## RECONSTRUCTION FINANCE CORPORATION

## OFFICE OF RUBBER RESERVE

*Summary of plants by status as of Jan. 1, 1949*

	Active	Standby	Surplus	Sold	Total
Copolymer Plants (GR-S).....	9	4	1	1	15
GR-I (Butyl) Plants.....	2				2
GR-M (Neoprene) Plant.....				1	1
Butadiene (Alcohol) Plants.....		2		1	3
Butadiene (Petroleum) Plants.....	5	4	1	4	14
Styrene Plants.....	1			4	5
Miscellaneous Projects.....	3		2	6	11
<b>Total.....</b>	<b>20</b>	<b>10</b>	<b>4</b>	<b>17</b>	<b>51</b>

NOTE.—In addition to these plants, two feedstock plants were transferred from the aviation gasoline program to the rubber program in 1946, and were operated for a short time in the production of feedstocks, but have never been considered an integral part of the rubber program. In August 1948, these plants were transferred to the War Assets Administration for disposal.

*Summary of plants by type*

Status	Number of plants	Capacity (tons per year)	
		Rated	Demonstrated
<b>Copolymer plants:</b>			
Active.....	9	<i>Long tons</i> 375,000	<i>Long tons</i> 453,750
Standby.....	4	225,000	281,250
Surplus.....	1	30,000	37,500
Sold.....	1	60,000	75,000
Total.....	15	690,000	847,500
<b>GR-I (Butyl) plants:</b>			
Active.....	2	55,333	66,000
Standby.....		12,667	14,000
Total.....	2	68,000	80,000
<b>GR-M (Neoprene) plant:</b>			
Sold.....	1	60,000	60,000
<b>Alcohol butadiene plants:</b>			
Standby.....	2	<i>Short tons</i> 140,000	<i>Short tons</i> 180,000
Sold.....	1	80,000	(1)
Total.....	3	220,000	180,000
<b>Petroleum butadiene plants:</b>			
Active.....	5	253,200	296,200
Standby.....	4	120,000	137,500
Surplus.....	1	15,000	12,000
Sold.....	4	19,900	26,800
Total.....	14	414,100	452,500
<b>Styrene plants:</b>			
Active.....	1	25,000	30,000
Sold.....	4	162,500	201,000
Total.....	5	187,500	237,000
<b>Miscellaneous projects:</b>			
Active.....	3		
Surplus.....	2		
Sold.....	6		
Total.....	11		
Grand total number of plants.....	51		

<sup>1</sup> Data on present capacity not available.

<sup>2</sup> Capacity of plants sold subject to Government requirements.

"Rated production capacity" should be distinguished from "rated capacity" shown in this listing. "Rated capacity" represents design capacity and is that currently carried on the records of Office of Rubber Reserve, while "rated production capacity" is to be assigned at some future date.

*Plant status and capacity***COPOLYMER PLANTS**

Operator	Location	Capacity (tons per year)	
		Rated	Demonstrated
ACTIVE PLANTS			
Firestone Tire & Rubber Co.....	Akron, Ohio.....	<i>Long tons</i> 30,000	<i>Long tons</i> 1 30,000
Do.....	Lake Charles, La.....	60,000	75,000
U. S. Rubber Co.....	Borger, Tex.....	45,000	56,250
Do.....	Naugatuck, Conn.....	30,000	1 30,000
Goodyear Synthetic Rubber Corp.....	Houston, Tex.....	60,000	75,000
Do.....	Los Angeles, Calif.....	30,000	37,500
B. F. Goodrich Co.....	Port Neches, Tex.....	60,000	75,000
General Tire & Rubber Co.....	Baytown, Tex.....	30,000	37,500
Copolymer Corp.....	Baton Rouge, La.....	30,000	37,500
Total.....		375,000	453,750
STANDBY PLANTS			
B. F. Goodrich Co. <sup>2</sup> .....	Port Neches, Tex.....	60,000	75,000
Goodyear Synthetic Rubber Corp. <sup>3</sup> .....	Los Angeles, Calif.....	<sup>4</sup> 45,000	56,250
U. S. Rubber Co.....	Institute, W. Va.....	90,000	112,500
National Synthetic Rubber Corp.....	Louisville, Ky.....	30,000	37,500
Total.....		225,000	281,250
SURPLUS PLANT			
Goodyear Synthetic Rubber Corp. <sup>5</sup> .....	Akron, Ohio.....	30,000	37,500
SOLD PLANT			
B. F. Goodrich Co.....	Louisville, Ky.....	60,000	75,000

**GR-I (BUTYL) PLANTS**

<b>ACTIVE PLANTS</b>			
Eso Standard Oil Co.....	Baton Rouge, La.....	25,333	28,000
Humble Oil & Refining Co.....	Baytown, Tex.....	30,000	38,000
Total.....		55,333	66,000
<b>STANDBY PLANT</b>			
Eso Standard Oil Co.....	Baton Rouge, La.....	12,667	14,000

**GR-M (NEOPRENE) PLANT**

<b>SOLD PLANT</b>			
E. I. du Pont de Nemours & Co.....	Louisville, Ky.....	60,000	60,000

<sup>1</sup> Demonstrated capacity of Firestone-Akron and U. S. Rubber-Naugatuck plants stated on basis of producing considerable quantities of latex. If only dry rubber were to be produced, plants can attain 125 percent of rating.

<sup>2</sup> Formerly operated by Firestone Tire & Rubber Co.

<sup>3</sup> One 30,000 long tons unit formerly operated by U. S. Rubber Co.

<sup>4</sup> One-half of one standard unit never completed.

<sup>5</sup> This plant is considered surplus to the requirements of the Synthetic Rubber Program and has been transferred to the Office of War Activity Liquidation of the RFC for disposal.

## BUTADIENE PLANTS

Operator	Location	Capacity (tons per year)	
		Rated	Demonstrated
ACTIVE PLANTS (PETROLEUM)		<i>Long tons</i>	<i>Long tons</i>
Cities Service Refining Co.....	Lake Charles, La.....	55,000	55,000
Humble Oil & Refining Co.....	Baytown, Tex.....	30,000	40,000
Neches Butane Products Co.....	Port Neches, Tex.....	100,000	125,000
Phillips Petroleum Co.....	Borger, Tex.....	56,200	56,200
Standard Oil Co. of Calif.....	El Segundo, Calif.....	18,000	20,000
Total.....		259,200	296,200
STANDBY PLANTS (ALCOHOL)			
Koppers Company, Inc.....	Kobuta, Pa.....	80,000	120,000
Carbide & Carbon Chemicals Corp.....	Louisville, Ky.....	60,000	<sup>1</sup> 60,000
Total.....		140,000	180,000
STANDBY PLANTS (PETROLEUM)			
Sinclair Rubber Inc.....	Houston, Tex.....	50,000	62,500
Esso Standard Oil Co.....	Baton Rouge, La.....	15,000	20,000
Shell Chemical Corp.....	Los Angeles, Calif.....	55,000	55,000
Southern California Gas Co.....	do.....	(30,000)	<sup>2</sup> (30,000)
Total.....		120,000	137,500
SURPLUS PLANT (PETROLEUM)			
Sun Oil Co. <sup>3</sup> .....	Toledo, Ohio.....	15,000	12,000
SOLD PLANTS			
Esso Standard Oil Co. <sup>4</sup> .....	Baton Rouge, La.....	6,800	6,800
Humble Oil & Refining Co.....	Ingleside, Tex.....	7,000	
Lion Oil Co.....	El Dorado, Ark.....	3,500	
Taylor Refining Co.....	Corpus Christi, Tex.....	2,600	
Carbon & Carbon Chemicals Corp. (Alcohol).....	Institute, W. Va.....	80,000	( <sup>5</sup> )
Total.....		99,900	6,800

## STYRENE PLANTS

<b>ACTIVE PLANT</b>			
Dow Chemical Co.....	Los Angeles, Calif.....	25,000	36,000
<b>SOLD PLANTS</b>			
Dow Chemical Co. <sup>4</sup> .....	Velasco, Tex.....	50,000	96,000
Koppers Company, Inc. <sup>4</sup> .....	Kobuta, Pa.....	37,500	45,000
Monsanto Chemical Co. <sup>4</sup> .....	Texas City, Tex.....	50,000	<sup>6</sup> 60,000
Carbide & Carbon Chemicals Corp.....	Institute, W. Va.....	25,000	( <sup>7</sup> )
Total.....		162,500	201,000

NOTE.—In addition to these plants, two feedstock plants were transferred from the aviation gasoline program to the rubber program in 1946, and were operated for a short time in the production of feedstocks, but have never been considered an integral part of the rubber program. In August 1948, these plants were transferred to the War Assets Administration for disposal.

<sup>1</sup> Demonstrated capacity is 150 percent of rating of the two complete units. Plans are currently under way for the rehabilitation of the third unit which was damaged by explosion.

<sup>2</sup> Crude butadiene purified in Shell facility.

<sup>3</sup> This plant is considered surplus to the requirements of the Synthetic Rubber Program and has been transferred to the Office of War Activity Liquidation of RFC for disposal.

<sup>4</sup> Sold subject to Government requirements.

<sup>5</sup> Data on present capacity not available.

<sup>6</sup> Capacity of facilities rebuilt after the Texas City disaster of Apr. 16, 1947.

<sup>7</sup> Data on present capacity not available.

## MISCELLANEOUS PROJECTS

Operator	Location	Product	Rated capacity
<b>ACTIVE PLANTS</b>			
National Carbide Corp.....	Ashtabula, Ohio.....	Calcium Carbide.....	72,000 short tons per year.
U. S. Rubber Co.....	Naugatuck, Conn.....	DD Mercaptan <sup>1</sup> .....	1,800 short tons per year.
University of Akron.....	Akron, Ohio.....	Evaluation Laboratory.....	
<b>SURPLUS PLANTS</b>			
Westvaco Chlorine Prod. Corp. <sup>2</sup> .....	Newark, Calif.....	Catalyst.....	10,200 short tons per year.
Esso Standard Oil Co. <sup>3</sup> .....	Baton Rouge, La.....	do.....	5,000 short tons per year.
<b>SOLD PLANTS</b>			
National Carbide Corp.....	Louisville, Ky.....	Acetylene <sup>4</sup> .....	1,500 MCF per day.
Do.....	do.....	Nitrogen <sup>4</sup> .....	160 MCF per day.
Davison Chemical Corp.....	Baltimore, Md.....	Catalyst.....	1,440 short tons per year.
Filtros, Inc.....	Rochester, N. Y.....	do.....	816 short tons per year.
E. I. du Pont de Nemours & Co.....	Newark, N. J.....	do.....	1,440 short tons per year.
Q. O. Chemical Co. <sup>5</sup> .....	Memphis, Tenn.....	Furfural.....	12,000 short tons per year.

<sup>1</sup> This plant is operated in conjunction with the U. S. Rubber-Naugatuck copolymer plant.

<sup>2</sup> This plant is considered surplus to the requirements of the Synthetic Rubber Program and has been transferred to the Office of War Activity Liquidation for disposal.

<sup>3</sup> Plant equipment being disposed of by Rubber Reserve.

<sup>4</sup> These plants are operated together, and are sometimes considered as one facility.

<sup>5</sup> Sold subject to Government requirements.



## APPENDIX E

# GOVERNMENT INVESTMENT IN SYNTHETIC RUBBER PLANTS

## RECONSTRUCTION FINANCE CORPORATION

## OFFICE OF RUBBER RESERVE

*Summary of Government investment in synthetic rubber plants*

	Number of plants	Plant invest- ment as of Oct. 31, 1948
Active plants:		
Copolymer plants.....	9	\$93,718,998
Butyl plants.....	2	53,140,420
Butadiene plants (petroleum).....	5	136,119,757
Styrene plant.....	1	13,599,289
Calcium carbide plant.....	1	3,244,795
DD Mercaptan plant (rubber catalyst).....	1	386,360
Government evaluation laboratory.....	1	1,849,260
Total active plants.....	20	302,058,879
Stand-by plants:		
Copolymer plants.....	4	44,259,007
Butadiene plants (alcohol).....	2	80,403,820
Butadiene plants (petroleum).....	4	68,837,830
Total stand-by plants.....	10	193,500,657
Surplus plants.....	4	17,151,503
Grand total.....	34	512,711,039

**NOTE.**—Plant investment figures shown herein represent original cost plus additions and betterments less retirements.

# **EXHIBIT 11**

July 21, 1945

MEMORANDUM TO MR. G. M. HEBBARD:

Re: Estimated Butyl Consumption

RUR SR 4

After the last allocation meeting held at the Rubber Bureau on July 17, I had occasion to talk with Mr. James regarding the latest estimates of butyl rubber consumption. Tabulated below by quarters are the estimates of U. S. consumption and export. These figures are based on using butyl rubber for the production of inner tubes on the present basis of pattern sizes, which includes all sizes except those for passenger cars.

Long Tons

<u>Quarter</u>	<u>U. S. Consumption</u>	<u>Export</u>	<u>Total</u>
3rd 1945	14,014	825	14,839
4th "	<u>14,601</u>	<u>1,125</u>	<u>15,726</u>
Total	28,615	1,950	30,565
1st 1946	15,071	975	16,046
2nd "	13,964	975	14,939
3rd "	14,094	1,025	15,119
4th "	<u>12,835</u>	<u>1,075</u>	<u>13,910</u>
Total	55,964	4,050	60,014

The above U. S. consumption is, of course, based mainly on the use of butyl rubber for inner tubes for the military and essential bus and truck requirements. Mr. James stated that although he did not have a breakdown as to what percentage was military, he estimated that approximately two-thirds of the total U. S. consumption was for military purposes.

In order to get some idea of the possible post-war requirements for butyl rubber, I asked Mr. James what the pre-war tube requirements were and he indicated that approximately 45,000,000 tubes were made annually and that it would require approximately 850 long tons of butyl for 1,000,000 tubes. The present contemplated program for passenger tubes made entirely out of GR-S is tabulated in column 1 below and the equivalent butyl rubber, in the event these were made from butyl, are tabulated in the second column.

- 2 -

<u>Quarter</u>		<u>Scheduled GR-S Passenger Tubes</u>	<u>Long Tons Butyl Equivalent</u>
3rd	1945	7,000,000	5,950
4th	"	<u>8,000,000</u>	<u>6,800</u>
Total		15,000,000	12,750
1st	1946	9,000,000	7,650
2nd	"	10,000,000	8,500
3rd	"	10,000,000	8,500
4th	"	<u>10,000,000</u>	<u>8,500</u>
Total		39,000,000	33,150

You will note that present schedules call for 39,000,000 passenger tubes to be fabricated out of GR-S in 1946, which is only slightly lower than the pre-war requirement. There is no way of telling how rapidly the military requirements will be reduced and, consequently, we cannot now predict when butyl will be diverted to passenger tubes for a complete conversion program.

It would, of course, be desirable to use butyl rubber for the production of all tubes and to this end the Rubber Bureau is still interested in obtaining maximum butyl production from existing facilities.



A. L. BRANDLHOFER  
Manager, Butyl Rubber Section  
Office of Rubber Reserve

# **EXHIBIT 12**

Humble Oil #2  
(Butyl Rubber)  
Plancer 1082

AGREEMENT OF LEASE

THIS AGREEMENT made and entered into this 18 day of May, 1942, by and between Defense Plant Corporation (hereinafter referred to as "Defense Corporation"), a corporation created by Reconstruction Finance Corporation pursuant to Section 5d of the Reconstruction Finance Corporation Act, as amended, to aid the Government of the United States (hereinafter sometimes called the "Government") in its National Defense Program, and Humble Oil & Refining Company (hereinafter called "Lessee"), a corporation organized and doing business under the laws of the State of Texas;

WITNESSETH:

WHEREAS, the expansion of plant capacity within the United States for the production of Butyl Rubber is important in the interest of the National Defense Program, and it is therefore proposed that a plant for the manufacture of Butyl Rubber, be established at or near Baytown, Texas, such plant to have an annual capacity of approximately twenty thousand (20,000) long tons of such Butyl Rubber; and

WHEREAS, it is proposed that Defense Corporation will acquire a site, or use land owned by it, at or near Baytown, Texas, suitable for the location of such Butyl Rubber plant; and

WHEREAS, it is contemplated that the Lessee and Rubber Reserve Company, a corporation likewise created by Reconstruction Finance Corporation (hereinafter called "Rubber Reserve"), will, within six (6) months from the date hereof, enter into a contract for the manufacture of Butyl Rubber in said plant;

NOW, THEREFORE, in consideration of the mutual covenants herein contained, it is agreed by and between the parties hereto as follows:

ONE: Lessee agrees that it will, to the extent requested by Defense Corporation, assist Defense Corporation in acquiring the plant site, and upon selection of a suitable plant site which can be acquired at a price and with title acceptable to Defense Corporation, Defense Corporation will purchase the same.

TWO: Lessee agrees forthwith and from time to time to prepare or cause to be prepared, and to submit to Defense Corporation for its approval, or arrange for such submission of, such plans, designs, specifications, and schedules as may be required for the construction and equipment of the plant and the acquisition and installation of the equipment and machinery necessary to provide the capacity of approximately twenty thousand (20,000) long tons per annum of Butyl Rubber; and Lessee

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(Butyl Rubber)

agrees, upon approval of such plans, designs, specifications and schedules by Defense Corporation, to proceed in accordance therewith and as agent for Defense Corporation cause to be completed as soon as practicable (it being understood that Lessee shall use its best efforts to effect such completion by December 1, 1943, or as soon as possible thereafter) the construction and equipment of the plant and the acquisition and installation of the machinery and equipment (hereinafter called the "Construction Program"), or to arrange for proceeding in such manner and for the completion of the Construction Program.

THREE: In carrying out the work to be performed under the Construction Program Lessee may, as agent for Defense Corporation, employ such contractors or engineers and enter into such contracts with them as it may deem advisable, with the written approval of Defense Corporation, or may negotiate for Defense Corporation such contracts which upon approval by Defense Corporation shall be executed by it. In carrying out the work to be performed under the Construction Program Lessee further agrees to negotiate and prepare a contract for the construction of said Butyl Rubber plant and necessary facilities with a reputable contractor approved by Defense Corporation. After such contract is negotiated it shall be presented to Defense Corporation, and if approved, shall be signed by Defense Corporation and the contractor. Lessee will countersign and certify all requisitions, bills and invoices rendered by the contractors or engineers in the performance of their obligations.

FOUR: In the execution of the Construction Program Lessee agrees to comply with, and give all stipulations and representations required by, applicable federal laws and further agrees to require such covenants of compliance, representations, and stipulations with respect to any contract entered into by it with others under such Program as may be required by applicable federal law; and notwithstanding the generality of the foregoing, Lessee agrees further that in the performance of this agreement it will not discriminate against any worker because of race, creed, color or national origin.

FIVE: Defense Corporation agrees that it will reimburse Lessee monthly for all direct expenses approved by Defense Corporation and incurred by Lessee in connection with the Construction Program, including the acquisition of the site, the supervision of all work under the Construction Program, the preparation of process designs and process and mechanical specifications and the countersigning, checking and certification of bills and invoices in connection therewith, which direct

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(Butyl Rubber)

expenses shall be deemed to include, but shall not be limited to the following items:

- (a) Direct salaries and wages of all employees of Lessee (including both Baytown and Houston office employees, employees stationed on the site and employees stationed at the plants or home offices of the contractor or contractors provided for herein or at the plants of suppliers), such as engineers, designers, draftsmen, estimators, expeditors, construction and metal inspectors, checkers, timekeepers, stenographers, blueprint and photostat operators, clerks, chemists, testers, laboratory assistants, lawyers, accountants, bookkeepers, purchasing agents, and all other employees of Lessee, including administrative employees, whether or not of the same class as those hereinbefore enumerated, plus thirty-five per cent (35%) of said direct salaries and wages, which said thirty-five per cent (35%) is hereby agreed upon between Lessee and Defense Corporation as a proper reimbursement to Lessee for heat, light, maintenance, taxes on Lessee's property not including the plant site, buildings and machinery and equipment to be provided hereunder, applicable general office overhead, vacations, sickness and accident benefits, company contributions to Annuity and Thrift plan, workmen's compensation insurance, Federal Unemployment Compensation and Old Age Benefit Taxes (Employer's contributions) and expenses of and company contributions to items of employees welfare applicable to such salaries and wages. In case the full time of any employee of Lessee is not applied hereunder, his salary or wage shall be charged only in proportion to the actual time applied, as evidenced by time sheets satisfactory to Defense Corporation.
- (b) All payments made by Lessee on subcontracts made by it and executed in connection herewith;
- (c) All materials, equipment and supplies purchased, acquired or used directly by Lessee in connection herewith but not otherwise provided for under the construction contract, and direct services including transportation loading and storage expenses, rendered by Lessee in connection therewith and not otherwise provided for hereunder;
- (d) Inspection services rendered by Standard Oil Development Company or by others for Lessee in connection with the Construction Program;
- (e) Expenses in securing technical advisors and consultants for special work in connection with the design and construction of the plant;
- (f) Rental paid by Lessee to others for the use of equipment, including automobiles, and expenses of operating and repairing such equipment and automobiles, and a reasonable rental for equipment, including automobiles, owned by Lessee;
- (g) Traveling and living expenses of Lessee's employees in connection herewith (but the same shall not be in excess of the usual expenses allowed by Lessee in the normal conduct of its business);
- (h) Minor expenses such as telegrams, telephone calls, teletype messages, expressage and postage;
- (i) All premiums on bonds and insurance policies (other than workmen's compensation insurance on Lessee's employees) which Lessee may be required to place in connection with the Construction Program, taxes (including sales and use taxes), assessments and other charges paid by Lessee during the course of construction and in connection therewith with respect to the site, buildings, machinery, equipment, materials, supplies and direct services; and
- (j) Such other expenses incurred by Lessee, as in the written opinion of Defense Corporation are proper for inclusion in the Construction Program.

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No salaries of Lessee's executive officers, no fees of its attorneys, and except as hereinabove specifically set out, no part of the expenses incurred in conducting Lessee's offices and no overhead expenses of any kind shall be included in the reimbursable costs hereunder.

SIX: Notwithstanding any other provision herein contained, the maximum amount which Defense Corporation shall be required to expend hereunder shall not exceed Sixteen Million Eight Hundred Fifty Four Thousand Seven Hundred Dollars (\$16,854,700), which amount shall include Lessee's estimated expenses hereunder and those of the contractors or engineers under the Construction Program, but it is understood that Lessee does not in any way guarantee the completion of the Construction Program for said amount.

SEVEN: Title to the site, buildings, machinery and equipment to be acquired hereunder shall, unless and until the same shall be transferred by Defense Corporation in accordance with the provisions hereof, be vested in Defense Corporation, and such machinery and equipment shall remain personalty notwithstanding the fact that it may be affixed or attached to realty.

EIGHT: Subject to termination or cancelation as hereinafter provided, Defense Corporation hereby agrees to lease, and does hereby lease, the said plant, including the site, buildings, machinery and equipment, to Lessee and Lessee does hereby lease the same from Defense Corporation for a term commencing with the date hereof and ending at a date five (5) years from the date the plant is ready for initial operation, as specified in written notice thereof to be given by Lessee to Defense Corporation. Defense Corporation and Lessee each agrees, upon the written request of the other, to execute and deliver such additional instruments of lease as may be necessary to carry out the provisions of this agreement.

NINE: This lease shall terminate automatically upon the expiration, termination, or cancelation of proposed agreement for the operation of the plant between Lessee and Rubber Reserve described in the preamble hereof and may be terminated by either party hereto upon written notice to the other in the event such proposed agreement is not entered into within six (6) months from the date of this Agreement of Lease.

TEN: The consideration of this lease is the sum of One Dollar (\$1) per year, payable on or before the first day of each year of the term hereof, and the services which Lessee herein agrees to render hereunder, including the negotiations and preparation of contracts as above set out.

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(Butyl Rubber)

ELEVEN: In addition to the provisions for termination set forth in paragraph NINE hereof, Defense Corporation may by notice in writing to Lessee cancel this lease in the event (a) that the said Butyl Rubber plant is not complete and ready for operation on or prior to December 1, 1943, provided, however, that such completion date may be extended in the event of and to the extent required by delays arising from causes beyond the control of Lessee or the contractors; (b) a receiver or trustee is appointed for Lessee or its property, or Lessee makes an assignment for the benefit of creditors, or Lessee becomes insolvent, or a petition is filed by or against Lessee pursuant to any of the provisions of the United States Bankruptcy Act, as amended, for the purpose of adjudicating Lessee a bankrupt, or for the reorganization of Lessee, or for the purpose of effecting a composition or rearrangement with Lessee's creditors, and such receiver or trustee is not discharged or any such petition filed against Lessee is not dismissed within sixty (60) days; or (c) of any violation of any of the terms, conditions or covenants of this lease or extension thereof by Lessee and the failure of Lessee to cure such violation within thirty (30) days from the giving of a written notice thereof by Defense Corporation to Lessee. Upon the expiration, termination or cancellation of this lease Defense Corporation shall have the right to invoke any remedy permitted by law or in equity for the protection of its interests hereunder, and Lessee hereby expressly waives all rights which it may have to redeem or to be served with any further notice of Defense Corporation's intention to cancel or terminate this lease other than as herein provided.

TWELVE: Upon the expiration of the term of this lease provided in paragraph EIGHT hereof, or upon cancellation or termination as provided in paragraph NINE, Lessee shall have and is hereby granted, for a period of sixty (60) days after such expiration or cancellation (hereinafter referred to as the "Negotiation Period") the right to negotiate with Defense Corporation for the purchase or lease of the site, buildings, machinery and equipment or any portion thereof, and, upon the establishment by the Lessee and Defense Corporation of mutually satisfactory terms and conditions, Defense Corporation will sell or lease, as the case may be, the property covered thereby to Lessee. It is understood and agreed (without in any way limiting the provisions of paragraph THIRTEEN hereof) that Lessee shall have no rights under the provisions of this paragraph TWELVE, in the event of the sale, lease, or other disposition of the plant by Defense Corporation, other than in the event of a transfer or conveyance to another branch of the Government, pursuant to paragraph TWENTY-THREE

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hereof. In the event of any sale to Lessee pursuant to the provisions of paragraphs TWELVE or THIRTEEN hereof, transfer of title shall be made without any representations or warranties whatsoever on the part of Defense Corporation. It is understood that the provisions of this paragraph shall not be applicable in the event of a cancellation of this lease pursuant to the provisions of paragraph ELEVEN hereof, in the event the proposed agreement between Lessee and Rubber Reserve for the operation of the plant shall not have been entered into within six (6) months from the date of this Agreement of Lease, or in the event that after execution, such agreement between Lessee and Rubber Reserve shall be terminated or canceled because of a violation by Lessee of any of the provisions thereof.

THIRTEEN: Defense Corporation agrees, to the extent that it lawfully may, that it will not, during the term of this lease, and for a period of sixty (60) days thereafter, sell or lease the site, buildings, machinery and equipment to be provided hereunder or any part thereof to any party or parties other than to another branch of the Government (in which event such sale shall be in all respects subject to paragraph TWENTY-THREE hereof) unless it shall first have offered the same for sale or lease to Lessee at a price or rental and upon terms and conditions equal to the best offer received by Defense Corporation, and Lessee shall have failed or refused to purchase or lease the same within thirty (30) days after Defense Corporation shall have made such offer to Lessee. It is understood that the provisions of this paragraph shall not be applicable in the event of a cancellation of this lease pursuant to the provisions of paragraph ELEVEN hereof, in the event the proposed agreement between Lessee and Rubber Reserve for the operation of the plant shall not have been entered into within six (6) months from the date of this Agreement of Lease, or in the event that after execution, such agreement between Lessee and Rubber Reserve shall be terminated or canceled because of a violation by Lessee of any of the provisions thereof.

FOURTEEN: So long as this agreement remains in full force and effect Lessee shall procure and maintain at its cost (except that during the period of construction, such insurance shall be at the cost of Defense Corporation, as provided in paragraph FIVE hereof) insurance on the buildings and on the machinery and equipment to be provided hereunder against fire, windstorm, flood, storm, explosions, and such other hazards and in such companies as shall be satisfactory to or required by Defense Corporation, and in such amounts as shall be adequate for the repair,

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restoration, or replacement of the property damaged or destroyed. The policies evidencing such insurance shall be made payable to, and delivered to Defense Corporation. In the event of loss under any of the policies, the proceeds shall, upon the written request of Lessee promptly made, be used by Lessee for the repair, restoration or replacement of the property damaged or destroyed, and to that end Defense Corporation shall promptly make available to Lessee the insurance proceeds received by Defense Corporation. Any property acquired in replacement shall be the property of Defense Corporation and so identified and shall be subject to all the terms and provisions of this agreement.

FIFTEEN: Lessee agrees to save Defense Corporation harmless against any liability whatsoever because of accidents or injury to persons or property occurring in the operation of the plant or the use of the machinery or equipment by Lessee. Lessee also agrees that during the term of this lease, it will procure and maintain at its cost (except that during the period of construction, such insurance shall be at the cost of Defense Corporation, as provided in paragraph FIVE hereof) public liability insurance and property damage insurance in such amounts and with such companies as Defense Corporation shall approve or require. The policies evidencing such insurance shall name Defense Corporation as an assured, and shall be delivered to Defense Corporation.

SIXTEEN: Lessee shall use reasonable care in the use and operation of the site, buildings and the machinery and equipment to be provided hereunder and shall keep the same in good state of repair, ordinary wear and tear excepted (but shall not be liable for any loss thereof or damage thereto except that resulting from Lessee's negligence or wilful misconduct), and upon the expiration, termination or cancelation of this lease, and upon expiration of the Negotiation Period, if any, Lessee shall forthwith yield and place Defense Corporation in peaceful possession of the site and buildings and of all the machinery and equipment to be provided hereunder free and clear of any liens and claims other than those resulting from claims against Defense Corporation. Nothing contained in this lease shall be construed to permit Lessee to use or operate during the Negotiation Period, if any, the site, buildings, machinery and equipment to be provided hereunder, or any portion thereof, for the production of Butyl Rubber or any other products unless the consent in writing of Defense Corporation and Rubber Reserve to such use or operation shall have been obtained by Lessee.

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SEVENTEEN: Lessee agrees to pay to the proper authority, when and as the same become due and payable, all taxes, assessments, and similar charges (except that during the period of construction, such taxes, assessments and similar charges shall be at the cost of Defense Corporation, as provided in paragraph FIVE hereof) which at any time during the term of this lease may be taxed, assessed, or imposed upon Defense Corporation or Lessee with respect to or upon the site, buildings, machinery or equipment or any part thereof, or upon the occupier thereof or upon the use of the site, buildings, machinery or equipment. Lessee also agrees to pay (except to the extent included in the Construction Program) all claims or charges for or on account of water, light, heat, power and any other service or utility furnished to or with respect to the site, the buildings, or the machinery or equipment or any part thereof.

EIGHTEEN: In carrying out the Construction Program and in the operation of the Butyl Rubber plant provided for herein Lessee agrees to comply with all applicable State, municipal and local laws and the rules, orders, regulations, and requirements of any departments and bureaus and all local ordinances and regulations, provided that nothing herein contained shall be construed as preventing Lessee from contesting in good faith the validity thereof or whether it has complied therewith. Lessee further agrees to indemnify and hold Defense Corporation harmless from any liability or penalty which may be imposed by local or State authority or any department or bureau thereof by reason of any asserted violation by Lessee of such laws, rules, orders, ordinances or regulations.

NINETEEN: Lessee agrees that it will not, without the prior written consent of Defense Corporation, use such site, buildings, machinery, and equipment for any purposes except for or in connection with the manufacture of Butyl Rubber under the terms of its contract with Rubber Reserve.

TWENTY: So long as this lease remains in effect, and for a period of one (1) year thereafter, Lessee shall maintain and make available to Defense Corporation for audit and inspection, its records pertaining to the acquisition of the site, the Construction Program, and the operations of the plant and any of the machinery and equipment. Defense Corporation shall have the right to inspect the site, buildings, machinery and equipment to be provided hereunder at all reasonable times during the continuance of this lease or extension thereof.

TWENTY-ONE: Lessee will not without prior written consent of Defense Corporation sell, assign, or pledge this lease or any of its rights or obligations

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(Butyl Rubber)

hereunder or sublease or permit the use by others of any of the property covered by this lease.

TWENTY-TWO: The failure of either party hereto to insist, in any one or more instances, upon performance of any of the terms, covenants, or conditions of this agreement shall not be construed as a waiver or a relinquishment of the future performance of any such term, covenant, or condition by the other party hereto, but the obligation of such other party with respect to such future performance shall continue in full force and effect.

TWENTY-THREE: It is contemplated that the site, buildings, machinery and equipment to be leased by this agreement may be transferred and conveyed to another branch of the Government and upon such transfer, such branch of the Government shall succeed to all the rights, powers, privileges, and obligations of Defense Corporation hereunder. In the event of such transfer, Defense Corporation shall cease to have any rights, duties, or obligations hereunder. Any transfer by Defense Corporation of the leased property shall be subject to the rights of Lessee under this Agreement of Lease and shall be conditioned upon the transferee assuming Defense Corporation's duties and obligations hereunder.

TWENTY-FOUR: All notices of every nature to be given pursuant to this lease and agreement may be addressed, if to Defense Corporation, to "Defense Plant Corporation, 811 Vermont Avenue, N.W., Washington, D. C.", or, if to Lessee, to "Humble Oil & Refining Company, P.O. Box 2180, Houston, Texas, Attention, Hines H. Baker", or, as to either party, addressed as may from time to time be otherwise directed in advance by such party. Any notice shall be deemed to have been duly given if and when enclosed in a properly sealed envelope or wrapper, addressed as aforesaid, registered and deposited, postage and registry fee prepaid, in a post office regularly maintained by the United States Government.

TWENTY-FIVE: No member of or Delegate to the Congress of the United States of America shall be admitted to any share or part of this agreement or to any benefit arising therefrom.

IN WITNESS WHEREOF, the parties hereto have caused their corporate seals to be hereunto affixed, and these presents to be signed by their duly authorized

1013535

RESOLUTION OF THE BOARD OF DIRECTORS OF  
HUMBLE OIL & REFINING COMPANY

"RESOLVED that Mines H. Baker as Vice President and H. K. Arnold as Secretary of Humble Oil & Refining Company are authorized to execute as the act and deed of the said Humble Oil & Refining Company the following:

(1) Agreement of Lease by and between Humble Oil & Refining Company acting as Agent for and in behalf of Defense Plant Corporation dated May 18, 1942, under which Humble Oil & Refining Company as lessee will assist in acquiring a site, prepare or cause to be prepared plans, designs and specifications for, and cause to be constructed a plant for the manufacture of 20,000 long tons per year of butyl rubber;

(2) Engineer-Contractor construction contract between Humble Oil & Refining Company acting as Agent for and in behalf of Defense Plant Corporation and Stone & Webster Engineering Corporation as Engineer-Contractor under which Engineer-Contractor agrees to furnish the engineering and construct a plant for the manufacture of 20,000 long tons per year of butyl rubber; and

(3) Contract between Humble Oil & Refining Company and Rubber Reserve Company dated May 18, 1942, covering the sale to and purchase by Rubber Reserve Company of the butyl rubber manufactured and produced in the aforesaid plant;

hereby ratifying and in all things confirming their action in so executing the same."

We, E. E. Townes, Vice President, and H. K. Arnold, Secretary, of Humble Oil & Refining Company, a corporation doing business at Houston in Harris County, Texas, hereby certify that the above is a full, true and correct copy of a resolution adopted by the Board of Directors of said corporation at a meeting of said Board duly called and held on the 18th day of May, 1942, at its office in Houston, Texas, at which meeting were present seven of a total number of eight members of said Board, same being a quorum thereof for transaction of business.

Witness my official signature and the seal of said corporation this the 28th day of May, 1942.

1013536

E. E. Townes  
Vice President

H. K. Arnold  
Secretary

RESOLUTION

RESOLVED, that in connection with the contract proposed to be entered into by and between Rubber Reserve Company and Humble Oil & Refining Company covering the annual production of approximately 20,000 long tons of Butyl Rubber in a plant to be located at or near Baytown, Texas, the Chairman be and hereby is authorized to execute for and on behalf of the Corporation a guaranty in the form set forth in said contract covering the performance by Rubber Reserve Company of the terms and conditions of said contract, and the Secretary, or an Assistant Secretary, be and hereby is authorized to affix the seal of the Corporation to said guaranty when so executed and to attest the same.

\*\*\* \*\*

The foregoing resolution was duly adopted by the  
\_\_\_\_\_ of Reconstruction Finance  
Corporation on June 1, 1942.

\_\_\_\_\_  
Assistant Secretary

APPROVED  
BY EXECUTIVE COMMITTEE  
RECONSTRUCTION FINANCE CORPORATION

JUN 1 - 1942

FOR THE  
SECRETARY

BY *James H. ...*

*SR-43*

*See 62-70-Rfe.*

1013537

# **EXHIBIT 13**

RA-0010 0-40

RuR-Form B-4

No. 206Humble Oil & Refining Company

Operator

Date July 8, 1947RuR SR 10 (Planocr 485)

Plant

Rubber Reserve Company  
Washington, D. C.

"RECONSTRUCTION FINANCE CORPORATION, OFFICE OF  
RUBBER RESERVE" IS SUBSTITUTED FOR "RUBBER RESERVE  
COMPANY," WHERE THE SAME APPEARS HEREON.

In accordance with the terms of the Agreement dated March 23, 1942, between Humble Oil & Refining Company and Rubber Reserve Company, covering the operation of the Butadiene Plant at Baytown, Texas and General Instructions Regarding Procedure, approval is requested of the following contracts and/or arrangements.

NAME OF VENDOR OR CONTRACTING PARTY	DESCRIPTION MATERIAL OR SERVICES	QUANTITY AND PRICE	REMARKS
Humble Oil & Refining Company	Estimate No. 7191	Total Estimated Expenditure \$1100	Accounting Allocation:
	Construct Concrete Drainage Trench, Ammonia Compressor House, GF Section - RuR SR 10	Contingency - 0 - Total Amount Requested for Approval \$1100	Capital Account \$1100 Retirement - 0 - Change in Plant Asset Value \$1100 Operating Expense - 0 - Reserve for Depreciation - 0 - Total Estimated Project Expenditure \$1100
	(For complete description, justification, and detailed engineering estimates, see attachments.)	The authorization herein contained is for the purpose of reimbursement under the terms of the captioned operating agreement and is specifically made subject to all of the terms and conditions of said operating agreement as well as the terms and conditions of the related Procedure Covering "Project Expenditures" as defined under Chapter 19.00 of the Manual of Administrative Procedure issued to your Company in connection with the captioned operating agreement.	

APPROVED

RUBBER RESERVE COMPANY

By E. Kenneth Jones  
Acting Chief, Administration Division

HUMBLE OIL &amp; REFINING COMPANY

By H. T. Jones  
(Name)  
Superintendent, RuR SR 10  
(Title)

1032000

1032000

BAYC-00001574

RuR SR 10  
Baytown, Texas  
July 2, 1947

ESTIMATE NO. 7191

Mr. H. F. Coss:

Attached is Estimate No. 7191 in the amount of \$1100, entitled,  
CONSTRUCT CONCRETE DRAINAGE TRENCH, AMMONIA COMPRESSOR HOUSE, OF SECTION -  
RuR SR 10.

The above amount represents the estimated expenditure required to  
construct a concrete drainage trench, and cover same with subway grating,  
along the north side of the ammonia compressor house.

Prior to the installation of this drainage trench, the area ad-  
jacent to and north of the ammonia compressor house was inadequately  
drained and stayed continually wet. This condition was undesirable since  
it was difficult for trucks to get into this area with oil drums and supplies  
for the GF Unit. It was particularly undesirable since daily washing of the  
compressor house floor left an accumulation of oily scum along the north  
side of this building. Consideration was given to digging a ditch to secure  
proper drainage in the area; however, this method was rejected since such a  
ditch soon fills in with weeds and dirt and is ineffective. Through the use  
of the concrete trench and a high pressure water hose, the compressor house  
floor washdown is now routed into a nearby manhole.

This work was tentatively estimated to cost less than \$1000, and  
the work was performed with local approval on Mechanical Order No. 613. Since  
the accumulated cost of this work exceeded \$1000, this estimate is being sub-  
mitted in accordance with Chapter 19.02 of Rubber Reserve's Manual of  
Administrative Procedure.

In view of the foregoing discussion, it is recommended that this  
estimate be approved.

*S. H. Coleman*  
S. H. Coleman

TEG:wnl  
Attach.

1032001

1032001

BAYC-00001575

## PLANCOR 485

Estimate No. 7191

Budget Item

Title CONSTRUCT CONCRETE DRAINAGE TRENCH, AMMONIA COMPRESSOR HOUSE, OF SECTION - RUR SR 10

ITEMS IN DETAIL	LABOR	MATERIAL	CONTRACT	TOTAL
1 Construct concrete drainage trench on north side of ammonia compressor house	500	500		1,000
2 Service costs	100	-		100
<b>TOTAL</b>	<b>\$ 600</b>	<b>\$ 500</b>	<b>\$</b>	<b>\$ 1,100</b>

proved 7191  
 COPY OF APPR'N  
 ORIGINAL APPROVED BY:  
 E. H. OLIVER RUR SR 10 TECH. SERVICE HEAD  
 H. F. GOSS, RUR SR 10 SUPERINTENDENT

Approved \_\_\_\_\_

proved \_\_\_\_\_

Approved \_\_\_\_\_

1032002

1032002

BAYC-00001576

PLANCOR 485  
ANALYSIS OF ESTIMATE

ESTIMATE NO. 7191

TOTAL AMOUNT OF THIS ESTIMATE .....\$ 1,100

Transfer of Equipment (Inter-Company).....\$

~~Office / 7/2/47~~ Service Costs .....\$ 100

TOTAL .....\$ 100

NEW MONEY REQUIRED .....\$ 1,000

*Estimated Cost Distribution*

	LABOR	MATERIAL	CONTRACT	TOTAL
Addition.....	\$ 500	\$ 500	\$	\$ 1,000
<del>Repair / 7/2/47</del> Service Costs.....	100	-		100
TOTAL CAPITAL.....	600	500		1,100
Repair.....				
Dismantle.....				
TOTAL EXPENSE.....				
TOTAL ESTIMATE.....	\$ 600	\$ 500	\$	\$ 1,100

*Change in Plant Investment*

TOTAL CAPITAL.....	\$ 600	\$ 500	\$	\$ 1,100
*Retirement.....				
Transfer of Equipment (Plant).....				
TOTAL.....				
INCREASE IN PLANT INVESTMENT.....	\$ 600	\$ 500	\$	\$ 1,100

\*Retire from:

Prepared by SEC on 6/30/47 Checked by SEC on 7/2/47 Approved by ONN on 7/2/47

1032003

1032003

BAYC-00001577

# **EXHIBIT 14**

RUR FORM GRI-4

No. 180  
**Humble Engineering Estimate No. 8115**

Date \_\_\_\_\_

**Humble Oil & Refining Company**

OPERATOR

**RuR SR 43**

PLANT

**RUBBER RESERVE COMPANY**

Washington, D. C.

In accordance with the terms of the Agreement dated May 18, 1942, between Humble Oil & Refining Company and Rubber Reserve Company, covering the operation of the Butyl Plant at Baytown, Texas and General Instructions Regarding Procedure, approval is requested of the following contracts and/or arrangements.

NAME OF VENDOR OR CONTRACTING PARTY	DESCRIPTION MATERIAL OR SERVICES	QUANTITY AND PRICE	REMARKS
Humble Oil & Refining Company	Skimmer Pump for Rubber Separator, GFHB Plant - RuR SR 43	Estimate \$1,700	Capital Account \$1,700
		Contingency <u>170</u>	Retired -0-
		Total..... \$1,870	Increase in Plant Asset Value 1,700
			Operating Expense -0-
			Total cost... \$1,700
Humble's mechanical forces will perform all work.	This estimate provides for the installation of facilities for "skimming" polymer from the surface of the new auxiliary separator basin at the cooling tower. The facilities consist of a steam pump, live steam supply line, adjustable pump suction box, and connections for loading a tank truck. The influent, which consists of water, polymer, naphtha and zinc stearate, is allowed to separate into two phases with the rubber and naphtha in the upper layer. The polymer is skimmed off and hauled off the plant site for disposal. The water flows into the plant sewer system, and through an A.P.I. oil separator to Scott's Bay.	The authorization herein contained is for the purpose of reimbursement under the terms of the captioned operating agreement and is specifically made subject to all the terms and conditions of said operating agreement as well as the terms and conditions of the related Procedure Covering Expenditures for Projects involving Additions to, Alterations, Improvements or Betterments of, or Replacements in the Plant as defined under Chapter 19.00 of the Manual of Administrative Procedure issued to your Company in connection with the captioned operating agreement.	
	The pump will replace the present manual operation, thereby releasing manpower with an estimated annual saving of \$2600.00.		This GRI-4 form, bearing Serial No. 180, prepared in conjunction with Humble Engineering Estimate No. 8115.

APPROVED

**RUBBER RESERVE COMPANY**

By [Signature]  
 Asst. Chief, Administration Division

**HUMBLE OIL & REFINING COMPANY**

By [Signature]  
 (NAME)

Operating Superintendent  
 (TITLE)

1025965

BAYHIS-00022162

FORM R-722 EB2005

ANALYSIS OF ESTIMATE

ESTIMATE NO. 8115  
GRI-4 Form Serial No. 180

BUDGET ITEM

Manufacturing Committee Data

TOTAL AMOUNT OF THIS ESTIMATE	\$ 1,700
Transfer of Equipment (Inter-Company)	\$ -
Overhead (Fixed)	\$ 100
TOTAL	\$ 100
NEW MONEY REQUIRED	\$ 1,600

Estimated Cost Distribution

	LABOR	MATERIAL	CONTRACT	TOTAL
Addition	\$ 650	\$ 1,050	\$ -	\$ 1,700
Replacement	-	-	-	-
TOTAL CAPITAL	650	1,050	-	1,700
Repair	-	-	-	-
Dismantle	-	-	-	-
TOTAL EXPENSE	-	-	-	-
TOTAL ESTIMATE	\$ 650	\$ 1,050	\$ -	\$ 1,700

Change in Plant Investment

TOTAL CAPITAL	\$ 650	\$ 1,050	\$ -	\$ 1,700
*Retirement	-	-	-	-
Transfer of Equipment (Plant)	-	-	-	-
TOTAL	-	-	-	-
INCREASE IN PLANT INVESTMENT	\$ 650	\$ 1,050	\$ -	\$ 1,700

\*Retire from:

1025966

Prepared by LEO on 12/29/45 Checked by JSC on 12/29/45 Approved by GEW on 1/3/46

RECEIVED

SKIMMER PUMP FOR RUBBER SEPARATOR, GFHB PLANT - Rur SR 43

[illegible]

Approved by:

Sheet 1 of 1

~~SECRET~~

# **EXHIBIT 15**

SLA-CPP-XX-128

## PRIOR APPROVAL OF REIMBURSABLE COST

RUS FORM 4

OFFICE OF RUBBER RESERVE

STANDARD OIL COMPANY OF NEW JERSEY  
LOUISIANA DIVISION  
BATON ROUGE, LOUISIANANO. GR-I-4 No. 357DATE April 21, 1947PLANT GR-I RubberRUR SR 15Reconstruction Finance Corporation  
Office of Rubber Reserve  
Washington 25, D. C.

In accordance with the terms of the agreement dated July 9, 1942 between Standard Oil Company of New Jersey, Louisiana Division, and Reconstruction Finance Corporation, covering the operation of the GR-I Rubber Plant at Baton Rouge, Louisiana, and Administrative Procedure, approval is requested of the following contracts and/or arrangements:

NAME OF VENDOR OR CONTRACTING PARTY	DESCRIPTION OF MATERIALS OR SERVICES	QUANTITY & PRICE	REMARKS
Standard Oil Company of New Jersey, Louisiana Division	General Separator for Rur SR 15 Sewer System.  This project expenditure covers the cost of installing a general separator at the outlet of the Rur SR 15 sewer system to prevent the release of waste oil and rubber into the Mississippi River.	\$200,500	Please refer to the attachment for details of this project expenditure.  Amount to be Charged to Capital Account \$200,500 Amount to be Retired from Capital Acct. _____ Net Change in Plant Asset Value \$200,500 Amount to be Charged to Operating Exp. _____ Amount to be Charged to Reserve for Depr. _____ Total Estimated Project Expenditure \$200,500
			1023856
			Ret'd unapproved per Rur let 6-19-47

APPROVED:  
RECONSTRUCTION FINANCE CORPORATION

BY \_\_\_\_\_

TITLE \_\_\_\_\_

Office of Rubber Reserve

STANDARD OIL COMPANY OF NEW JERSEY  
LOUISIANA DIVISIONBY H. J. VOENIES

TITLE \_\_\_\_\_

Asst. General Manager

1023856

BRHIS-00008338

SLA-REF-WE-91-20

ESTIMATE SHEET - BATON ROUGE REFIN

ESTIMATE NUMBER 3903

AMOUNT \$200,500.00

DATE March 12, 1947

SHEET NO. 1

## CHEMICAL PRODUCTS OIL SEPARATOR

ITEM NO.	DESCRIPTION	MATERIAL	LABOR	TOTAL
	<b><u>BASIS:</u></b>  This estimate covers the construction of a general separator for the 72" aqueduct, Plancor 572, together with sloop pumping equipment and piping. It is based on Esso Engineering Department Estimate No. 8128 dated October 22, 1946, modified by conference in Mr. Patch's office on December 17, 1946.			
1.	<b><u>SEPARATOR, EXCAVATION AND BACKFILL</u></b>  Includes approximately 6500 cubic yards of excavation for by-pass trench, separator structure and wooden sump. Allows for backfilling of about 2200 cubic yards of material.	\$ 1,200	\$ 10,600	\$ 11,800
2.	<b><u>PILING</u></b>  Placing 240 wooden piles 50' long including cost of piles.	6,300	6,000	12,300
3.	<b><u>CONCRETE</u></b>  Approximately 750 cubic yards concrete for separator structure and pipe supports. Covers waterproofing of the pump pit.	12,900	19,400	32,300
4.	<b><u>DISTRIBUTION BAFFLES</u></b>  78 streamlined cypress posts 4" x 9-7/16" x 13' installed with steel retainers.	2,200	300	2,500
5.	<b><u>MISCELLANEOUS EQUIPMENT</u></b>  Consisting of 6 small hand winches, one 2-ton trolley, two 20' rotating oil skimming pipes, eight 24" Chapman Sluice Gates with extension stems and floor stands, eight lead sludge sump stoppers and extensions.	5,700	900	6,600
6.	<b><u>PUMPS, BLOWERS, DRIVERS AND STARTERS</u></b>  Two 200 gpm 50% delta sloop oil pumps with 30 horsepower explosion proof motors and starters, one 2400 cfm air blower with one horsepower motor and starter.	3,800	400	4,200
7.	<b><u>STRUCTURAL STEEL</u></b>  Walkway, handrailings, oil retention baffle, trolley structure, pipe supports, miscellaneous, anchor bolts, etc.	8,100	3,400	11,500

THIS EXPENDITURE SHOULD BE CHARGED AS FOLLOWS:

PLANT  
ACCOUNT\*OPERATING AND  
DISMANTLING  
EXPENSE

SIGNED

APPROVED

DATE

1023857

1023857

BRHIS-00008339

SLA-REF-ME-91-20

ESTIMATE SHEET - BATON ROUGE REFIN

ESTIMATE NUMBER 3903 AMOUNT \$200,500.00 DATE March 12, 1947 SHEET NO. 2

## CHEMICAL PRODUCTS OIL SEPARATOR

ITEM NO.	DESCRIPTION	MATERIAL	LABOR	TOTAL
8.	<u>PIPING</u> Cast iron sludge pipe, brass and cast iron slop oil pipe, manifolding, tie-in lines and slop line to burning pit.	\$ 8,500	\$ 6,000	\$ 14,500
9.	<u>INSTRUMENTS</u> Sump level controllers and pump pressure gages.	700	300	1,000
10.	<u>ELECTRICAL</u> Power connections for motors, lighting circuits and 100 KW overhead feeder from Toluene Plant.	2,600	1,900	4,500
11.	<u>ROADWAY TO SEPARATOR</u> Access roadway, includes fill, grading and gravel surfacing.	1,500	4,000	5,500
12.	<u>TEMPORARY CONSTRUCTION AND MISCELLANEOUS</u>	3,500	4,800	8,300
13.	Indirect expense on items 5, 6, 8, 9 and 10.	7,500		7,500
	SUBTOTALS	\$64,500	\$58,000	\$ 122,500
14.	<u>STANDARD OIL DEVELOPMENT COMPANY ENGINEERING</u> Covers cost of development drafting, requisitioning of materials, estimating and coordination.			17,500
15.	<u>CONTRACTOR'S COSTS</u> Overhead taxes, insurance, fees, etc.			37,500
16.	Contingencies			23,000
	TOTAL			\$ 200,500

THIS EXPENDITURE SHOULD BE CHARGED AS FOLLOWS:

PLANT  
ACCOUNT \$200,500.00\*OPERATING AND  
DISMANTLING  
EXPENSE

SIGNED

APPROVED

1023858

DATE

IUB:cb

1023858

BRHIS-00008340

Esso

STANDARD OIL COMPANY OF NEW JERSEY

LOUISIANA DIVISION

P. O. BOX 551, BATON ROUGE 1, LA.

April 21, 1947

MANUFACTURING DEPARTMENT

M. W. BOYER  
VICE PRESIDENT AND GENERAL MANAGER

357

Mr. W. Arthur Murphy  
Office of Rubber Reserve  
811 Vermont Ave., N. W.  
Washington 25, D. C.

RuS SR 15 - Plancor 572  
General Separator for RuS SR 15  
Sewer System -  
Butyl Rubber Plant, Baton Rouge  
RuS Form GB-I-4, No. 357

Dear Mr. Murphy:

Reference is made to RuS Form GB-I-4 No. 293, which covered preliminary engineering and design work for a proposed general separator at the outlet of the RuS SR 15 sewer system. The foregoing project expenditure was approved by your office on July 2, 1946.

Preliminary designs were recently completed and a definitive estimate made from these designs indicates that the separator installation will cost \$200,500. We are accordingly submitting for your approval the attached RuS Form GB-I-4 No. 357, in the amount of \$200,500, to cover the cost of final engineering and construction of the separator. Details of the proposal are given in the attachment. Details of the project expenditure are given in the attached copy of our Definitive Estimate No. 3903.

Since some of the sewer effluent to be processed by the proposed separator originates in plants owned by Standard, we feel that it will be in order for Standard to bear a portion of the operating costs of the separator. Under separate cover we are submitting for your approval Form S-44 No. 137, indicating a proposed method of allocating these costs.

Very truly yours,

M. W. BOYER

By H. J. Voorhies

DL:afz  
Attachments

1023859

1023859

BRHIS-00008341

# **EXHIBIT 16**

MISSISSIPPI RIVER COMMISSION  
 Louisiana Division  
 P. O. Box 551, Baton Rouge, L. La.

September 9, 1947

Mr. Frank J. Googan, Technical Advisor  
 Stream Control Commission  
 P. O. Box 9055  
 University Station  
 Baton Rouge 3, Louisiana

Dear Mr. Googan:

This will refer to your letter of July 27 in regard to the construction of a master separator at the outlet of Callaghan's Bayou. As you indicate in your letter, we applied in 1941 for authority and assistance to build such a separator, and our request was denied by the War Production Board on the basis that the installation of such a facility was not sufficiently urgent to justify the use of the critical materials required. It was our understanding that the War Production Board arrived at this decision after consultation with representatives of the Corps of Engineers.

Since that time we have taken a number of steps other than the master separator to reduce the oil content of refinery effluent. An important step in this regard was the installation of silt treating facilities in which silt accumulating in the bottom of existing refinery separators is treated for removal of oil content. We believe that oil bearing silt settling in Callaghan's Bayou during high water is responsible for the difficulty we occasionally experience during extreme low stages of the river. When this silt becomes displaced by the relatively rapid current in the Bayou during a period of falling water with extremely low river stage, we have noticed that oil is carried into the river and it was a temporary condition such as this to which you undoubtedly referred to in your letter. We believe that the silt treating unit has very greatly reduced the trouble from this source.

A large number of other improvements in the river pollution problem have been made, and in total, we have installed facilities since 1944 amounting to more than \$809,050 to improve our situation in this respect. In addition to the silt treating unit mentioned above, these facilities consist mainly of installations to collect oil contamination at its source before getting into the effluent water stream, to eliminate oil emulsion and emulsifying materials from getting into the effluent stream, and general improvement in the refinery separators to improve their operation in removing oil from the effluent stream.

In regard to the master separator, we still have the installation of such a separator under active consideration. There are, however, a number of engineering details that have not as yet been satisfactorily worked

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and. For example, we are not sure yet that we know of a practical method of removing the silt that would collect in the bottom of such a basin and which would ultimately impair the separating efficiency if allowed to build up. We are actively engaged in engineering studies on this problem.

In regard to the silt content of the effluent, very substantial progress has been made in reducing the silt content coming from the Chemical Products operations, and work is continuing on the general problem of reducing silt content of the effluent.

There are three rubber plants discharging effluent into Lake Sam Rayne - the Butyl Rubber Plant, operated by Buss Standard for the Office of Rubber Reserve; this Company's privately owned Bussville Plant; and the Copolymer Corporation's CR-3 Rubber Plant. In 1945 and 1947 we installed additional separating facilities on the effluent from our Bussville Plant. We have recently obtained approval from the Office of Rubber Reserve for and construction has started on a new separator at the outlet of the sewer from the Butyl Rubber Plant area which we believe will improve the general situation from this area.

We feel that the installations that have been made in recent years have been very effective in improving the condition of the effluent of this plant. Considerable amount of additional equipment has been installed and a good deal of attention has been given in improving our practices in order to keep oil out of the river. We trust that you will agree that substantial progress has been made, and we can assure you that our efforts in this respect will continue.

Very truly yours,

M. J. VONNIE

EMM:JRM/ngo:is

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